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BIOLOGY AND PATHOLOGY OF PREGNANCY.

BY DR. JULIUS NEUMANN, of Vienna, Austria,

DOCENT OF OBSTETRICS AND GYNECOLOGY, IMPERIAL UNIVERSITY OF VIENNA.

Scientific investigations during the past decade have almost revolutionized our views as regards pregnancy in general, its influence upon the life of women, and its importance as an etiologic factor in the manifold diseases peculiar to womankind. Much fruitful work has been done in the study of the normal and pathological histology of the developing ovum. To give here a full account of the whole advancement would transgress the scope of this journal, and I will, therefore, confine myself to a brief survey. I will try to give a short sketch of the views on pregnancy as held by the modern biologist and pathologist.

In the very moment when the spermatozoon penetrates the egg, viz., when impregnation takes place, a minute body, the impregnated ovum, begins to manifest an activity the effects of which immediately become noticeable. The process of cleavage begins in the nucleus, and soon extends throughout the vitelline mass. The fructified ovum enters the uterus and lodges in the uterine mucosa. All the structures of the uterus begin to undergo important alterations, the most noticeable being the transformation of the mucosa into decidua. Other symptoms of the fact that impregnation has occurred appear. Menstruation ceases; probably the ovaries do not discharge any more ova and discontinue their other function, important for the economy of the whole body, known as internal secretion. These facts have a far-reaching practical importance, as I will show later. The importance of the site and of the mode of the imbedding of the impregnated egg are nowadays generally acknowledged, while, however, the significance of the cessation of internal secretion during pregnancy as an etiological factor in the pathology of pregnancy, is still largely based on hypotheses. Distinct changes in the general condition of the impregnated woman become manifest. Most of them are incident to pregnancy—that is, are physiological sequelæ of the normal process of fecundation. From a teleological standpoint, therefore, we ought to consider them normal; but as physicians we are bound to call them pathological, and must try to avoid respectively to alleviate them. These symptoms may be divided into those psychic and those somatic. There is noticeable in the majority of cases a change in the disposition of the woman. Some become bright and merry, others sad and despondent, or quarrelsome and morose, or irritable and nervous. That this psychical change is not always due to external circumstances (*e. g.*, to the knowledge of the woman that she is to

expect offspring, which is as well a cause for hilarity as for sorrow or repentance) is proved by cases in which the change in disposition is the first symptom of impregnation, observed before cessation of menstruation. More common are the somatic alterations during pregnancy. Sickly, poorly nourished or anemic individuals not so rarely begin to gain in flesh and flourish; healthy women, however, begin sometimes to fall away and feel miserable and weak. Often this change is due to the alteration of the stomach, almost characteristic of pregnancy. Continuous nausea or excessive vomiting are liable to considerably impair the economy of the body. Of other symptoms often observed during pregnancy I may shortly mention headache, salivation, hyperhydrosis, obstipation, etc. While we do not yet know the real cause for these psychic and somatic disturbances during pregnancy, for the physiologic alterations taking place locally (in uterus and its appendages) or in remote places (changes in the mammary glands), recent investigations trend to prove that they are produced by a change in the metabolism of the body. The question of autointoxication during pregnancy holds, at present, a predominant position in the studies of modern scientists.

Well in accord with this hypothesis, for instance, is the fact that during pregnancy the irritability of the nervous system is usually increased. In a series of observations I found that in pregnant women, as a rule, especially during labor, the patellar reflex is markedly increased. (*Centralbl. fuer Gyn.*, 1895, p. 201.) I observed that in pregnant women the resistency of the skin against electrical currents is considerably lessened. From extensive examinations I came to the conclusion that the decrease in the pulse-rate during the lying-in, known as *bradycardia puerperalis*, is caused by an irritation of the *nervus vagus* (*N. pneumogastricus*). Since, according to my observation, this slowing down already begins during labor, I am justified to make mention of this condition here, while speaking of the biology of pregnancy. (*Monatschr. fuer Geb. und Gyn.*, Vol. ii, p. 278.) I will but refer to the symptom of dermatography observed in pregnant women. H. W. Freund reported that he found in a great number of cases this condition in which tracings made on the skin leave a distinct reddish mark.

These changes and disturbances while common, and forming ample proof of the revolution taking place in the whole organism of the pregnant woman, are not found in every instance. Not so very rarely the impregnated ovum has far progressed in its development before some minor symptom, as increase of the size of the abdomen, arouses the attention of the woman.

Undoubtedly suggestion plays a certain part in the symptomatology of pregnancy. There are cases of pseudocyesis, of imaginary pregnancy, on record in which the patients exhibited all the typical disturbances of pregnancy without being pregnant.

In the second half of pregnancy two other factors are added which may give rise to disturbances. The motions of the fetus, which under normal conditions are but an uncomfortable feeling for the pregnant woman, may be painful, especially so if there is lack of amniotic fluid. Another train of symptoms is produced by the size of the uterus, by its pressing against the abdominal wall, the diaphragm and the various abdominal organs.

During pregnancy the amount of the muscular tissue in the uterine wall is immensely increased, the broad ligaments unfolded, all the suspensory ligaments

of the uterus lengthened, the peritoneum exceedingly stretched, and the adnexa are lifted out of their normal position from the depth of the pelvis into the abdomen. These changes are normal, physiological and without parallel in all the other organs during their functional life.

The external genital organs are involved in the changes due to pregnancy in a very early stage. A bluish discoloration of the vulva is one of the first symptoms of impregnation. The hyperemia brings about a more copious mucous discharge. Stasis due to pressure produces edema, or dilatation of the veins of both limbs. Here we have changes which well illustrate how close these physiological changes approach pathological alterations. An old chronic catarrh of the vagina or cervix may recrudesce. The same may occur in a case of old chronic gonorrheal infection, in which suddenly during pregnancy acute symptoms reappear. And again the softening and hyperemia of the genitalia render them more susceptible for a new infection. We often see how with the beginning of pregnancy an erosion of the cervix is established or the patient develops the symptoms of an acute cystitis. It is a well-known fact that in cases of chronic gonorrhea pregnancy affords an opportunity for the infection of the upper parts of the genital organs, the infection spreading immediately after confinement to uterus, tubes and peritoneum. And then the sequelæ of pregnancy may be a wearisome sickness, sterility, sometimes a languishing state for lifetime.

I will only remind here of the various infections with other germs which are so frequently observed during pregnancy, labor and in the puerperal stage. There are infections of the ovisac, producing putrescence of the ovum, or tympanites uteri, infections of the genitalia, producing locally endometritis, parametritis, infection and suppuration of the uterine appendages or the peritoneum, or giving rise to a general pyemia or septicemia.

The infection of the genitalia during labor is now generally recognized as an accidental and in a certain degree avoidable factor, thus, *sensu strictiore*, belonging to the chapter of pathology of pregnancy; but interesting for the biologist remains the fact that pregnancy, labor and the puerperium bring every woman in the great danger of contracting an infection of a more or less dangerous character. The probability of infection is furthermore increased by the infliction of injuries and wounds of the external genitalia, even if they are small and entirely within the physiological limits. Again I will simply mention here the possibility of the spontaneous rupture of the uterus during delivery.

Pregnancy is liable to bring about a recrudesence of old, non-infectious inflammations of adjacent organs or tissues. A chronic parametritis may return to an acute stage, but, on the other hand, we sometimes observe how changes in the blood circulation produced by the pregnancy result in the resorption of old exudates in the pelvis; firm adhesions between the uterus and other organs are softened and stretched by the growing uterine tumor. And again this pressing and stretching may have a deleterious effect upon some old encapsuled perityphlitic abscess, breaking its firm wall and leading to death by general peritonitis.

An other important question is the influence of pregnancy upon existing neoplasms of the uterus. It is a well-known fact that even small myomata during pregnancy increase to considerable size, the same change being sometimes observed in ovarian cysts. And again we must state that in rare instances

these increased myomata after confinement are reduced to a size smaller than the former one. We do not believe that pregnancy produces a distinct predisposition for the new formation of neoplasms, either benign or malignant, with the only exception of the deciduoma, which is a malignant growth directly originating from the chorion, viz., a product of pregnancy. There is a decided tendency of progress in malignant growths during pregnancy, as is best known in the cases of carcinoma of the cervix. A marked effect is exerted by pregnancy upon the visible lesions and the course of a syphilitic infection. Condylomata swell to voluminous tumors and increase the liability for septic infection. It is claimed that the syphilitic infection itself in pregnant women shows a more severe development. Within the limits of this paper I do not consider the influence of syphilis of the mother upon the fetus, and *vice versa*.

Another problem of extreme interest is the influence of pregnancy upon diseases in remote organs. It is generally recognized that tubercular processes, especially of the lungs, show decided aggravation during pregnancy, and artificial interruption of pregnancy is acknowledged to be justifiable in certain instances. Similar are the conditions in cases of diseases of the heart. In these patients, however, the greatest danger is produced by parturition itself. In both the tubercular patients and those suffering from heart trouble an eventual puerperal infection means a far more dangerous complication than in otherwise healthy *puerpere*. That pyemic and septic processes can be the direct causes for the establishing of heart diseases may be merely mentioned.

Pregnancy is a complication in the course of all the acute infectious diseases, while, however, the effect of the infectious disease upon the pregnancy is the more noticeable. Premature interruption is the more common occurrence, and is for some of these diseases almost typical, *e. g.*, croupous pneumonia.

The organ most often injured by pregnancy is the kidney. The presence of albumen and casts in the urine of pregnant women is very common. In the majority of cases these alterations are transient and disappear immediately after the termination of pregnancy; in some cases, however, it has been observed that a severe nephritis has followed. Here we have once more an example of how certain processes, considered pathological under normal conditions, are physiological during pregnancy, and may, on the other hand, without distinct symptoms, be transformed into real pathological ones. The same gradual transformation is seen in some cases of psychic alterations during pregnancy finally leading to real psychoses.

So far I have dealt only with facts which well illustrate how pregnancy brings about various changes and alterations in the functions of the normal and diseased organs. But there is furthermore to be mentioned a group of diseases the existence of which is bound to the existence of pregnancy, as, for instance, hyperemesis gravidarum, eclampsia and osteomalacia. The two first mentioned ailments, if occurring in a severe form, may lead to the death of the sufferers, and again illustrate the dangers of pregnancy, even for the healthy woman. To this latter group belong, furthermore, a series of conditions the etiology of which was not understood until more recent investigations revealed a number of interesting facts regarding the pathology of the impregnated and developing ovum. I refer to the implantation of the egg outside of the uterus in tube or ovary in cases of ectopic pregnancy, or implantation at an abnormal site in the uterus itself, producing placenta previa. I may be allowed to allude more in detail to the condition known as abnormal adherence of the placenta.

In 1895 I was called upon to attend a case of placenta previa in which at the time of the two previous confinements the placenta had to be removed manually. Bimanual version was made, but after expulsion of the fetus the hemorrhage continued. Expression of the placenta was tried but failed. Therefore it was removed with the hand. It was found that the placenta was firmly adherent to the uterine wall, and at some places so that parts had to be left unless I wanted to take the risk of perforating the uterus. In spite of all analeptica the patient died two hours *post-partum*. Careful histological examination of placenta and uterus was made. In my report of this case (*Monatschr. fuer Geb. und Gyn.*, vol. iv) I was the first to describe a condition which since this time has been confirmed by other investigators. I found that there was complete absence of decidua serotina, the chorion villi being directly attached to the uterine muscles, on some places deeply invading into the blood sinuses. These findings easily explained the abnormally firm adherence of the placenta and the impossibility of completely removing the placental tissue even by means of the fingers. To-day it is almost generally acknowledged that the histological picture of chorion villi penetrating into the musculature is typical in cases of abnormally adherent placenta.

In a certain way analogous is an abnormally firm adherence in some cases of hydatiform moles. Solowej reported a case of hydatiform mole in which the villi completely penetrated the uterine wall and by way of the blood vessels finally had grown into the vena cava. I published a case of malignant deciduoma which developed after the expulsion of a "destructive" hydatid mole. In this case I was able to prove a complete absence of decidua serotina, and therefore I feel justified in claiming an analogy between real adherence of the placenta and destructive hydatiform moles. Both conditions are due to a pathological implantation of the ovum and involve considerable danger for the patients.

If we are forced to consider the growing ovum as a parasite, even under normal conditions, the likeness is still more striking in these, luckily, rare instances, in which parts of the ovum directly invade into and destroy maternal tissues. While abnormal adherence of the placenta and certain cases of hydatid mole illustrate the destructive qualities of the ovum fairly well, a still more striking proof is given in the condition now usually described as deciduoma malignum.

Deciduoma is a malignant new growth, which develops after pregnancy in the interior of the uterus at the very place where the placenta was situated. The tumor penetrates the uterine wall, invades the blood vessels and forms, by way of transportation of small particles through the blood current into other parts of the body, early metastases, thus resembling the course of sarcoma. There are cases on record in which this growth developed during the time of pregnancy and metastases were formed while the ovum was still in the uterus. In other cases the place of the egg insertion was found in normal condition while malignant metastases were established in the vagina. Malignant deciduoma was observed after normal full term labor, after abortion and more often after discharge of an hydatid mole. In regard to the pathology of this interesting growth, I believe that deciduoma is a degeneration of the cancerous type of the epithelial covering of the chorion villi. This view was first promulgated by Marchand, and in several publications confirmed and enlarged by myself. Based

upon the examination of a number of hydatid moles, I was able to show that in all cases of hydatid mole, in which at a later date the development of a deciduoma was observed, the mole itself revealed certain characteristics of malignancy. I found that in these moles the protoplasmatic outer layer of the villi, the syncitium, had invaded the deeper stroma of the villi, entirely analogous to the condition of the epithelium in cases of cancer. In spite of contradictory views, expressed by other investigators, I still adhere to my belief that these changes in the syncitial covering of the villi must be regarded as characteristic for malignancy.

While the last word has not yet been spoken in regard to the etiology and pathology of this growth, this may be stated with positiveness, that the modern understanding of this tumor formation has brought about a complete revolution of our views regarding the possible pathogenetic aspects of pregnancy. This remarkable fact at least has been established, that the ovum or, more exactly, certain cellular elements of the ovum, are liable to give rise to the formation of a malignant growth, and we have found that this cancerous transformation of the ovum may already begin during pregnancy.

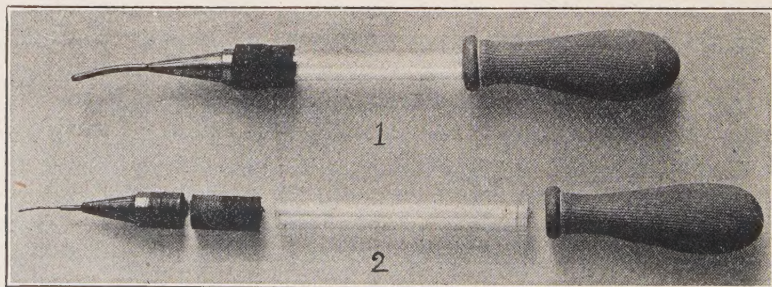
And with this I will close the consideration of the importance and influence of pregnancy upon the life of womankind. I trust that I have been able to show that the changes and alterations are manifold. As stated in my introductory remarks, to consider all of these changes in detail would fill a book, and therefore I have limited myself to a consecutive, but by no means complete, survey of those conditions which illustrate the influence of pregnancy upon the general condition of the body, upon the function of normal and diseased organs, upon general disease, and briefly of the origin of diseases during pregnancy, of diseases limited to the existence of pregnancy, and finally of the pathology of the ovum itself.

A CONVENIENT LACHRYMAL SYRINGE.

BY ARTHUR E. EWING, M. D., St. Louis, Mo.

(ILLUSTRATED.)

In the accompanying half-tone (Fig. 1) is shown the design of an instrument which combines for the lachrymal duct syringe the advantages of the rubber bulb, by which any degree of pressure may be recognized, and the glass



cylinder, in which the action of the solution may be seen. In its parts it consists (see Fig. 2) of the ordinary rubber nipple used for medicine droppers (a round bulb may be used if preferred), a glass tube of any desired size, a piece of rubber tubing, and the syringe tip. The last is made of silver, and at the end

toward the glass tube is fashioned with a socket, into which the tube fits snugly, but not too firmly, the glass then having a tendency to break. The joint is made air and water tight by the rubber tubing. The points may be of gold or silver, and of any size. For diagnostic purposes a fine gold point, blunt and a little grooved at the end, is preferable, as it can be passed readily into the normal punctum, the grooved part acting as the probe and yet not interfering with the flow of the fluid used. For puncta that are dilated or slit only moderately, a size larger, also of gold, serves best, being less liable to clog and admitting of a larger stream. Gold, ten or fourteen carat, is best adapted for these fine points; silver has proved to be too soft. The larger points, for canaliculi that admit of number six or eight Bowman probes, may as well be of silver. The outside diameter most satisfactory for each of these sizes is 0.6, 0.9 and 1.3 mm., and the points are continued in this size to lengths of three-eighths to three-fourths of an inch. The rubber parts will deteriorate, but being ordinary articles in the market, they are easily renewed. When they become a little loose about the glass this may often be remedied by knitting upon them a rubber band, such as takes the place of twine upon packages.

As there is nothing about any of the parts of the syringe that will corrode, it may be kept practically always sterilized in a strong aqueous solution of carbolic acid. For this may be provided a tall glass, such as is used for soda water or beer and is easily obtained. A layer of absorbent cotton placed on the bottom will prevent injury to the points when returned to the glass after having been used. In addition to sterilizing the syringe, the carbolized solution also prevents any deposits of salts within the points and keeps them open and ready when wanted, it being only necessary to remove the carbolic acid by placing in clean water for a moment. For further protection and cleanliness the instrument may be boiled *ad libitum*.

FALLACIES OF CYSTOSCOPY.

BY LOUIS E. SCHMIDT, M. D., of Chicago.

There is hardly any other method of surgical exploration which has undergone a more extensive evolution and become more popular among the specialistic profession than cystoscopy. It is an old experience that nothing so much impairs the results and is apt to finally discredit a method, than overrating the same and not being aware of its shortcomings. For this reason it is my intention to quote some instances in which cystoscopy is apt to deceive the observer, thus leading to wrong conclusions and even causing unwarranted operations.

While the trigonum and the internal urethral orifice are the most interesting areas because of the overwhelming majority of morbid conditions located there, on account of this they are more apt to produce a wrong determination of the findings. It is nothing unusual that by surveying the trigonum a part of the free plane of the prism is covered by a protruding fold of the urethral mucosa. In this case the whole field of view is covered with a reddish tinge, so that the idea of an inflammation may be conveyed, although nothing of the kind exists. It is, therefore, paramount to be never satisfied with the results of a trigonum examination if not all the views taken from different positions of the cystoscopic beak are uniform, at least in their essential features.

Another point of view which quite often leads to error is the fact that the

ureteral openings lie in different cases in entirely different distances from the urethral orifice. Quite often the ureteral openings are overlooked because they are almost hidden in the orificial folds, and the cystoscope is pushed far into the viscus in the search for the ureteral openings, while the prism has already passed over them.

If inflammation or edema changes the appearance of the trigonum and makes its surface rough, the finding of the ureteral openings may become extremely difficult, and quite often small depressions in the mucous membrane are entered by a catheter because they are taken for the entrance to the ureter. Quite a damage can be done to the patient by poking around in an inflamed and emaciated mucosa, while in some cases even the absence of one kidney and its ureter has been diagnosed because the cystoscope failed to detect the ureteral opening. The first-mentioned mistake can be avoided in the following way: If there is any doubt as to whether one of the probable ureteral openings or niches is in fact the ureteral entrance, the finger is introduced either into the vagina in women or into the rectum in male patients, and this finger presses the doubtful area towards the cystoscopic window; in this manner the bottom of the niche is sufficiently exposed to make possible the decision whether in its depth the ureteral opening is to be found or not. The second difficulty referred to makes great demands upon the patience of the observer and upon the endurance of his eye. In such a case, nothing else can be done than to watch closely the area which corresponds in a symmetric sense to the place of the other ureter, and to watch for the squirting-out of the urine. The observation of the urinary whirl can be facilitated by feeding to the patient methylene-blue some time before the examination. The urine then acquires a green color in the kidneys, so that the whirl can be easily distinguished in the other fluid which distends the bladder. However, when there is pus within the viscus, and if slightly adherent to the trigonum, body movements will cause it to become free and to float in the water. This must not be mistaken for the whirl, which whirl may also have specks of pus coming from the kidneys.

Another source for error is the examination of the internal urethral orifice. There are two factors which are to be considered as the main agents in producing mistakes. One is, that the parts of the orificial circumference are naturally seen while they are very close to the cystoscopic window. That means that they are magnified in their appearance to the eye of the observer. If the Nitze cystoscope is used, objects are to be seen only in their natural size if the distance from the prism to the object is about 3 cm. The second factor is, that by the introducing of a rigid, straight instrument of considerable size, the opening and organs and tissues constituent to it are changed in formation and appearance. That this is so can easily be proven if we inspect a normal urethral orifice through a suprapubic incision, or if a cystoscopy is performed through a suprapubic opening. Then the urethral orifice appears as a very small fovea surrounded by a few shallow grooves. Quite often, either hypertrophic or edematous folds of the internal urethral orifice, magnified through the optical apparatus, impose upon the observer as tumors, polypi; even suprapubic incisions have been made on the force of this erroneous diagnosis. In order to avoid this mistake, the following points must be kept in mind: These mucosa folds appear, as a rule, in great numbers. They are not transparent at all, and always convey the impression of rigidity. The polyp in the neighborhood of the orifice is a very movable object. It floats

around like water-plant. It is always transparent, even to a high degree, and the loop of bloodvessels which run through it can always be observed.

Nowadays a point which has come into quite considerable prominence is the position which cystoscopy takes in judging probable prostatic changes, so far as they can be diagnosed by means of cystoscopy.

This is extremely important in the preliminary examination for a Bottini operation. While it is true that considerable information can be gained so far as the propriety of the Bottini in a single case is concerned, a superficial cystoscopy without minute appreciation of the condition and findings, will lead to fatal errors.

In the first place, it must be kept in mind that the essential information which we can get by cystoscopy in proposed Bottini operations is the decision whether a barrier exists which can be severed by a galvano-cautery blade with probable success.

Now, it is paramount that this barrier should belong to the bladder cavity and not to the prostatic urethra. But quite often the case is as follows: Because a straight rigid tube is passed through the urethra, nodules are pressed into the trigonum and consequently into the cystoscopic view, yet such nodules, or at least the bulk of their mass, really belong to the territory of the prostatic urethra even though they just border on the trigonum. A superficial cystoscopic examination shows now that a barrier exists. A Bottini incision can be made on the force of this diagnosis and no success is accomplished if the case ends favorably—while quite often serious consequences follow this erroneous diagnosis. The operator, still feeling resistance to the glowing blade, keeps on cutting, according to the rule, until the whole obstacle is severed. Now, these cuts inside of the prostatic urethra lead to serious complications, among which phlebitis and urinary infiltrations are the most frequent. The diagnosis of the barrier which can be successfully and dangerlessly operated by the Bottini method can only be made if this barrier is shown positively to belong in fact to the bladder. This can be done by noticing the following points: The protrusion and elevation into the viscus must appear as covered with bladder mucosa and not with the urethral mucosa, thus proving that the mass was in the territory of the bladder before the cystoscope was introduced. The *bas fond* behind the barrier must be a deep one. If the ureteral orifices cannot be seen, there is always cause for suspicion that the tumor was pushed into the bladder.

Another mistake which is quite frequently made is the erroneous diagnosis of a trabeculated bladder, when in fact there is none. In nervous individuals, especially in women, the bladder wall reacts to any stimulation; the touch of the beak or the heat of the lamp often cause circumscribed contractions, which if very energetic make the muscular bundles protrude into the bladder. The trabeculated bladder should be diagnosed only if the trabeculation is a uniform one all over the fundus and vertex, and if surveying the different parts of the bladder proves that the protrusion of muscular bundles is a constant one and not a temporary phenomenon only.

One of the most pronounced conditions which lead to erroneous diagnosis is the edema bullosum. Not only by its impressive appearance but also by the presence of the causative adjacent pelvic tumor, it quite frequently leads to the diagnosis of a poliferating malignant tumor. It is an interesting fact, for instance, that one of the old Nitze cystoscopic atlas pictures doubtless repre-

sents an edema bullosum, although at that time it was not diagnosed, but still in the cystoscopic literature is spoken of as a cancer.

Tumors which are covered with incrustations, quite often are taken for calculi, while calculi partly imbedded in diverticula between the succulent folds of an inflamed mucosa are taken for tumors.

Tumors which are pedunculated, but on account of their mushroom-like form cover their pedicle, are considered malignant on account of their broad base. Now, all these doubtful cases can be cleared up if, in order to complete our examination, an operative cystoscope is used following the examination by the first instrument. With the cystoscopic forceps the objects should be grasped and moved around in different directions, so that sufficient information can be obtained in order to establish a correct diagnosis.

Enlarged veins or varicosities sometimes are seen at the lateral walls of the bladder. They appear on observing from above with a bluish black color and are apparently on a broad base. When examining from the side they are slightly translucent and of a pinkish purple color.

The error to which I wish to especially call attention is the diagnosing of cystoscopic burns as idiopathic ulcers. I saw not only diagnosed, but even demonstrated, such burns as ulcers. While the inexperienced cystoscopist is more apt to burn the bladder, he is liable by the same reason to misunderstand and misrepresent these burns. The experienced man will easily recognize them for what they are, because of their location and the lack of inflammatory reaction in their neighborhood. Furthermore, there is a decisive test, namely: these burns heal up inside of ten or fourteen days without any curative interference, which is never the case in actual ulcers.

There are general conditions in the way of examining which are apt to influence the reliability of determining cystoscopic findings. If the bladder is distended with air, there is such a shining appearance of the mucosa that the multitudinous and various reflexes make it quite difficult to find out exactly about the details. This condition is increased during an extended examination, through the urine which flows down out of the ureters. Another complication may arise through not working with an appropriate optical apparatus. It must not be forgotten that the total examination of the bladder furnishes combination pictures only. A proper optical apparatus enlarges the field of view, and this is one of the prominent features of Nitze's cystoscope. Pictures derived from the observations through a cystoscope of direct view and without the view being enlarged with an optical apparatus are apt to lead to misconstructions, because they are combined out of views of very small areas.

THE SIGNIFICANCE OF APHONIA IN ANEURYSM OF THE ARCH

BY WILLIAM PORTER, M. D., of St. Louis.

The radical cure of aortic aneurysm is yet an hypothesis, but the care of the patient and the prolongation of life is a problem, and partial solution is possible. I firmly believe that when an early diagnosis is made, and the proper care instituted, there may be an extension of double the usual life expectancy in such cases. If ever aortic aneurysm is catalogued as a condition in which cure can be effected, it will be when we learn to recognize the lesion in its incipiency, and to this end the study of each symptom is important.

Again, while I have not statistics to prove the assertion, I cannot but think that aneurysm is of more frequent occurrence than formerly. It may be that this is only apparent because of the better diagnostic methods of modern practice, but surely there is an increase of the conditions that we know are etiological factors in the determination of aneurysm. Rheumatism, lithemia and the uric acid diathesis are almost a sequence of the urgent, intense American life, while notations of specific disease are found on a large proportion of the pages of our case books.

Be this as it may, each case of aneurysm is a study and each case of aortic aneurysm is a problem not only in itself, but because of the dependent phenomena always shown at the site of the lesion, or in adjacent organs.

While many signs are more or less important and several of these combined may warrant a diagnosis, yet there is only one positively characteristic of thoracic aneurysm, and that is the presence in some part of the chest of a pulsating tumor, not to be mistaken for the heart, but which beats isochronously with the heart. Balfour adds that each aneurysmal impulse is as forcible as the heart-beat, and that the expansion is in every direction. While this is true in many cases, possibly the statement should be modified where the aneurysm is sacculated, and particularly if it is partly filled with laminated fibrin. When the aneurysm has developed towards the outer thoracic wall the impulse often seems greater than that of the heart.

I have elsewhere (American Laryngological Association, 1899) called attention to the value of the intra-esophageal method of determining the presence of the abnormal aortic impulse and the possibility of auscultating the aneurysm by way of the esophagus (*N. Y. Med. Jour.*, December 9, 1899). To more than mention this, which with me is now something more than experimentation, is not my purpose in this paper.

The dyspnea of aneurysm, while generally a laryngeal symptom—to be mentioned presently—is sometimes caused by pressure upon the bronchial plexus, with consequent bronchial spasm. In one case this was the only form of dyspnea present, and its severity was increased by the recumbent position.

Tracheal tugging and tracheal pulsation, as well as dysphagia, may appear; the latter varying in intensity at times, but generally at a stage when there is other and more positive evidence. They are not symptoms upon which great reliance can be placed in the early stages.

The Roentgen rays promise much and have added to the interest of this study. So far, its evidence has been corroborative rather than original, but even so, it is one of our most valuable aids.

Pain in the region of the aorta is frequently spoken of as characteristic of aneurysm, but I have not found it reliable or constant. The pain of pressure and tension, so often mentioned in books, is not only often absent, but is almost exactly simulated in many cases of neurasthenia—in fact, in the latter condition it is of frequent occurrence. I have had patients who for years complained of the pain usually referred to as aneurysm who were only convinced of its neurotic origin by the lapse of time.

Far more indicative and just as frequent is pain in the region of the fifth or sixth dorsal vertebra. I remember a case in which this was the only symptom as far as I could learn, though I had no personal knowledge of the history. The patient, a man of forty years of age, died from rupture a few minutes before my

arrival. It was stated that he had been treated by a noted neurologist for spinal irritation, and the autopsy showed vertebral caries from pressure. This pain may also be found in neurasthenia, but in these cases it is lower—opposite the solar plexus—or, as a point of second selection, about the fifth cervical.

Time will not permit me to review the evidence obtained by direct auscultation and percussion in aneurysm. I would, however, emphasize the importance of the arterio-diastolic murmur and shock over the point of greatest dullness, especially if the second sound at the cardiac base is clear and distinct. The conveyance of the systolic aneurysmal bruit along the arteries, in some cases as far as the brachial artery (Glasgow), is also a point worth remembering.

But it is in the study of the laryngeal symptoms that I wish to confine myself in this paper. Let me at the outset recall the fact that pressure upon the recurrent nerve from aneurysm or thoracic tumor does not necessarily produce aphonia. I deem it of value to mention this because it is to be noticed that in many clinical reports the statement is made that the laryngeal evidence was negative because there was no aphonia.

The phenomenon of compensatory arytenoid movement (which formed the basis of a paper by the writer in 1895) is now sufficiently established. The laryngeal image may be seen to be normal in appearance and function except in one respect—where there is paralysis of one recurrent nerve, most frequently the left, the corresponding cord may be seen in the cadaveric position, while the opposite cord may cross the median line and phonation be possible.

In such cases, however, it is impossible that equal tension be made on both cords, and the unequal vibration will produce decided change in the voice—a hoarseness (W. T. Porter), a monotone, and inability to reach a high note (Newman, Mulhall). One or all of these symptoms may be present. Sometimes at the beginning there is not even a loss of movement, but a congestion, consequent, doubtless, upon laryngeal irritation. The only subjective symptom at this stage may be a more or less constant laryngeal cough. In some of these cases the pressure upon the nerve being increased by the growth of the aneurysm, complete aphonia results.

It has been noticed that a bilateral adductor paralysis may be present when only one recurrent nerve is involved. It is possible (Dr. George Johnson) that one recurrent center takes on increased and compensating action when the other fails, and, being stimulated beyond the normal, it, too, may in time fail in its function.

The dyspnea of aneurysm, though not a constant symptom, presents many phases and should not be overlooked. When it is distinctly laryngeal it is associated with and dependent upon motor paralysis of one or both sides. Sometimes the narrowed glottis is still sufficient for easy respiration during quiescence, but exertion produces greater inspiratory demand, and during the effort the paralyzed cords are drawn violently downward and inward, with resultant apnea.

In conclusion, let me urge the examination of the heart and aorta in all cases where there is a unilateral congestion or faulty movement in the larynx, and on the other hand a laryngoscopic examination in all cases of suspected aneurysm. In at least three cases the laryngeal evidence was to me the earliest indication.

and Poynton, and represents the actual absolute cardiac dullness. There is no evidence of any hypertrophy of the left ventricle. On palpation a very distinct thrill is felt, limited to the pulmonary area. On auscultation there is an exceedingly rough systolic murmur, synchronous with the thrill. This murmur is heard loudest in the second left interspace just to the left of the sternum. It is not transmitted up to the vessels of the neck. It can, however, be heard at the apex, though not nearly so distinctly. It is not transmitted to the angle of the scapula.

The second pulmonic sound is very feeble.

The pulse is small, irregular, and varies from 102 to 120.

During the two months that the child has been under observation, the temperature has been slightly above normal most of the time, never exceeding 100.2° , however.

Considering the character of the lesion, one would naturally be suspicious of such a temperature, as perhaps indicating the beginning of a tubercular process, seeing that from the nature of the case this is the valvular lesion which predisposes to the affection. Repeated careful examinations of the lungs have, however, invariably been negative. The moist rales present on admission had disappeared after a week's stay in hospital.

The temperature might possibly mean the existence of a subacute endocardial inflammation, the result of the diphtheria, though this must necessarily remain a matter of conjecture.

It is not at all uncommon in this form of lesion of the right heart to note the absence of both dyspnea and cyanosis for a comparatively long period after birth, so that their absence for three and one-half years in this case would not militate against the diagnosis of congenital valvular lesion.

DELIVERY OF A DOUBLE MONSTER (DICEPHALUS).

By P. T. B. SHAFFER, M. D., of Elizabeth, Pennsylvania.

(ILLUSTRATED.)

The monstrosity shown in the accompanying illustrations was born of American parents, both of German extraction. The mother is a primipara, *æt.* thirty. In the progress of labor the left foot presented, and I waited until the os was fully dilated, when I ruptured the membranes and all of the liquor amnii came away with a rush. The right foot was then brought down, having now the fetal abdomen to the maternal left. I then found the left hand of child's left arm and brought it down, then the right arm, when an inferior maxilla was discovered by an examination over the abdomen of the fetus. Not fully satisfied because of the resistance offered, I investigated further and found another inferior maxilla by examination over the right side of the fetus. Still bent upon hasty delivery, finger was inserted into the mouth of the under head, rotating the face with the chin in the right sacro-iliac synchondrosis, raising the fetal nates toward the maternal pubes; this face swept the sacral cavity and the other, with gentle traction, followed, labor being completed in an hour from the bursting of the amniotic sac. The fetus was alive at the commencement of labor, but died before the heads had passed through the pelvis. There was but one cord, and a normal placenta of moderate size. No instruments were used, nor was any anesthetic. The passage of the heads ruptured the perineum, requiring suture. The mother's recovery was uneventful.



FIG. 1.



FIG. 2.

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EDITED BY

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Docent of Obstetrics and Gynecology, University of Vienna, Austria.

FRANZ NEUGEBAUER, M. D.,
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JULIUS SCHNITZLER, M. D.,
Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,
Berlin, Germany.

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EDITORIAL COMMENT.

THE ST. LOUIS MEDICAL LIBRARY.

For three years the doors of the Medical Library have been thrown open to the profession. The invitations to become members sent to physicians in this city, of all schools, have met with acceptance by a number not proportionate to the many physicians in St. Louis, which is rather a sad reflection on the literary habits and tastes of those remaining outside the pale of the Library.

The active members have labored earnestly in its behalf, and the medical profession of this city certainly owes them a debt of gratitude for establishing and maintaining an institution whose noble purpose is to instruct those who hold the lives of many in their hands in the best and latest methods to cope successfully with this or that disease.

When one considers the many advantages there are to be gained by being associated with the Library, it is indeed strange that every physician does not appreciate the benefit laid at his door.

All will concede that it is the duty of every medical man to do the best in his power for those who place themselves confidently under his care. By neglecting to keep himself *au courant* with the advanced thought of the day he is undoubtedly failing in this regard. Where can he better keep abreast with the progress of medical science than within the walls of the St. Louis Medical Library Association? It is folly to suppose that any man has in his office as many journals as are on the shelves of the Library. However, granting that he has a goodly number, it is safe to say that they are not in such a condition that articles on any one subject are obtainable at a moment's notice. By referring to the index of the Library he will find not only the books, but also the original articles of the more important journals, arranged and classified so that his work is greatly facilitated and much precious time is saved thereby.

It sometimes happens that physicians in looking up articles say: "I have the journal in which that article appears," but until they consulted the index did not know or had forgotten that such articles were in their possession. They were as utterly lost as if they were buried under the ashes of Mont Pelee.

This Library, so well started, is destined to become more and more valuable each year, and we trust that with the co-operation of each member of the local profession it will in time rival the Library of the New York Academy of Medicine or that of the College of Physicians and Surgeons in Philadelphia.

THE COMMUNITY OF THE INTERESTS OF THOSE WHO SPECIALIZE IN MEDICINE.

At a recent meeting of the Society of Dental Science of this city, one of the speakers expressed a thought which implies a lesson for those of us who follow a more or less limited line of practical work. This gentleman's idea was to broaden the usefulness of the society by the admission of new members, not dentists, but men selected from the various correlated specialties; men who could direct the dentist's ideas into channels outside his own specialty, and who themselves might at the same time profit by the association. The idea is in itself a worthy one, for no conscientious practitioner doubts that our chief aim here, aside from the general advancement of science, is to do the greatest possible amount of good for those entrusted to our care. Other things being equal, the man with the broadest knowledge is the most capable practitioner; hence it appears that the very contact which the Society of Dental Science fosters, might prove of no less benefit to the aurist, rhinologist, oculist and oral surgeon, not to mention others, than to the man who fills teeth and fashions plates.

Eminent orthodontiasts inform us that certain nasal catarrhal affections depend upon malposition of the teeth: and that further it is little use to treat the nose until the deformity is corrected. But, on the other hand, the teeth will not stay in place unless the nasal affection is properly cared for. Now, if the patient's best interests are to be considered, is there not in this one instance at least a decided necessity of the man who treats the teeth and the man who treats the nose consulting together.

But this is not all by any means, for certain dental subjects interest the aurist in no small measure. Consider, for instance, the injuries and diseases of the maxille which are associated with a menace to the eustachean tube; these surely require the care of both the gentlemen just mentioned, and it is by no means clear that the patient's best interests are conserved by the fact that each is unacquainted with the other's methods.

Tumors of the superior maxilla not infrequently, by their invasion of contiguous tissues, go so far as to cause cerebral symptoms, in which case the dentist must know how to avail himself of the neurologist's diagnostic and prognostic aid; on the other hand, the latter can only advise intelligently when he knows something of the possibilities and the limitations of oral surgery.

The oculist holds, in many respects, a still more intimate relation to the dentist. For example, fractures of the orbital plate of the superior maxilla cause the most intense ocular symptoms, as is well known at times. The dentist is, of course, in no position to treat them, and equally helpless is the oculist when called to such a patient in whom the injury just mentioned has been so extensive as to render necessary the intelligent attention which is now accorded the fractured alveolar process.

To go further, cleft palate makes, if neglected or improperly treated, work

for dentist, oral-surgeon, aurist, laryngologist, and stomach specialist; and while most specialists desire practice, still the honest ones do not want to get it in that way. The moral is plain.

THE USEFULNESS OF A FAD.

As fads in fashion, so fads in medicine. Just at present there is a vast amount of literature being published upon prostatectomy. Why an operation which has been done more or less successfully for the last twelve years should call forth now such a flood of literature, is explicable only upon the assumption that there is some stimulus of no small moment.

However far a fad may lead, sooner or later the subject recedes to its normal level and resumes a solid basis. Fads, besides furnishing amusement and entertainment to those engaged, emphasize actual needs, and, if nothing else is accomplished, are justified in that they stimulate original investigation and act as a suggestion to some conceptive genius, when otherwise the subject would have passed unnoticed.

While a heated discussion as to the relative value of, and the indications for the Bottini operation, perineal prostatectomy, suprapubic prostatectomy, or the combined operation, by this or that method, is going on, it is pleasing to note two articles reporting the results of careful and painstaking pathological investigation. In the January and February numbers of the *Ann. des Mal. des Organes Genito-urin.*, Halle and Motz publish their histological findings in one hundred bladders of chronic cystitis, including the prostatic bladder, and show how that bladder differs from others of chronic inflammation; namely, in the formation of trabecule and atrophy of the external muscular coat, and rather look for the beginning of this process in a primary change in the blood vessels of an old subject with diminished vitality of tissue; while Greene and Brooks (*J. A. M. A.*) April 26, 1902) report their microscopic findings in fifty-eight hypertrophied prostates and come to the conclusion that the hypertrophy of the organ is the result of a previous and prolonged chronic posterior inflammation.

If Greene and Brooks are right, then we must go further and begin to treat the prostate before the hypertrophy takes place—and this will no doubt be a great triumph for those who discredit all operative procedures and rely upon conservatism and palliation.

THE LEGAL RESPONSIBILITY OF PHYSICIANS IN ANCIENT TIMES.

Medicine in its primary inception was a domestic art, practiced by the member of a family seemingly possessed of the greatest skill for soothing and relieving pain, according to the understanding of the times. Natural aptitude and the tendency toward the division of labor common to all mankind, developed competency and superiority in this as in all other arts. Such medical knowledge as was evolved in man's struggle with nature and his fellow-beings gradually passed into the possession of the priests, and by them was guarded and utilized. Thus, with every race as far back as history records, we find the early practice of our profession to have been usurped by the priests. This condition existed until the more enlightened period, marked by Grecian supremacy, when the healing art was no longer limited to the priesthood. With the separation of medicine from religion there was necessity to define the responsibility of the physician to the law—a necessity which did not previously exist, as the priesthood, being in favor with the gods, could commit no error. This question of

legal responsibility of the physician was discussed in the *Muenchen. Med. Wochensh.* of March 25th, by Dr. J. Pruss, who brings out particularly that the law of ancient times seemed to have had more regard and its interpreters more consideration for physicians, than is frequently observed in the present day.

Investigation of the subject shows that among the Greeks the immunity of the physician from punishment for failure to save a patient's life was first recognized in legal manner. In Plato's draft for a new constitution it was first suggested that a physician cannot be made legally liable for the death of a patient if the death was not due to his practice. Then, as now, was heard the complaint, that only physicians have the right to kill other people without being killed in reparation, which complaint Philemon expressed in a characteristic epigram. Similar observations were made in Rome, though of course here we must not forget that the Roman citizen met the immigrating Greek physician with hate and contempt, and did not even deter from denouncing his presence being for the purpose of exterminating the Romans with poisonous drugs. This feeling was expressed by Plinius in his mild sarcasm, that only physicians enjoy impunity for homicide.

In India, the law of Manu declared that physicians who committed malpractice in treating animals should pay the lowest rate of fine; if in man, the middle fine. Later an addition was made to the law, which declared that if malpractice was done in treating a royal officer, the highest fine should be adjudged. The most detailed consideration of this topic is found in the Talmud of the ancient Jews, here, first of all, is a collection of laws called Tosefta, collected about 200 A. D., which of course contained many of much earlier existence. In Tosefta a clear definition is made between error and negligence on the part of the physician. One section states that a physician who practices with the permission of the state must be free from punishment if the damage on the patient was caused by an error, but he must suffer punishment if he should harm with intent. Regarding error, another section states that physicians, while not responsible to the judges of this world, are accountable to the Courts of Heaven. Quite different, though, was the view taken of negligence, concerning which the law states that if the physician wounds the patient more than is necessary for his cure, he is to suffer punishment accordingly, viz.: If he treats his slave on account of an eye disease and this eye becomes blind, the slave is to be freed by him. The Germara, another collection of Jewish laws, states that if a man wounds another he is guilty before the law, but if a physician performs a surgical operation he is immune from punishment, as is shown by the teachings of the Bible—the Bible containing the law that a man who kills another unintentionally is considered a homicide and is to go into exile of his own volition, but if the man killed the other with intent or intrigue, he is to be put to death.

These Bible laws did not allow exceptions, and therefore it was concluded that if the death of a patient resulted from error of the physician, the latter is to be exiled. On the other hand, this law protected the physician from capital punishment, since it is clear that in operating on a patient the wound inflicted is without intent to do harm. It is very noteworthy and interesting that the collection of laws mentioned above (Tosefta) always makes distinct reference to the physician who practices with the permission of the state and emphasizes that quacks are subject to the common law and are liable to its penalties if they do harm. With the downfall of the Jewish empire these laws were no longer in force, but even then the rabbis declared that no one should treat a patient who was not educated for it, otherwise he was liable to become a murderer, and if a physician ever became conscious that the death of a patient was due to an error in his treatment he should go into exile of his own will.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

A Study in Antiperistalsis of the Intestines (Gruetzner).—HEMMETER, Baltimore (*Archiv fuer Verdauungs-Krankheiten*, vol. viii, pt. 1-2), in support of the observations and experiments of Gruetzner, who injected into the rectum of small animals, sawdust, charcoal, etc., in suspension in physiological salt solution, and found these substances six hours later in the stomach and small intestines, gives the results of his investigations on this subject. His experiments were carried out on the human subject, as well as in animals. Charcoal, bismuth subnitrate, starch granules, etc., which he injected into his own rectum, and likewise into those of students, could be removed from the stomach several hours later. These experiments were carried out under the strictest precautions. The author's conclusions are as follows: There is a movement of small particles from the rectum toward the stomach. This movement is augmented when particles of lycopodium, starch granules, bismuth subnitrate, etc., are injected in suspension in physiological salt solution. It is interfered with or entirely suspended when the substances are in weak solution of potassium chlorate or hydrochloric acid.

The movement is peripheral. Sections through the intestines invariably show these particles lying immediately upon the epithelium of the mucosa.

The wandering of these particles toward the stomach goes on simultaneously with the central movement of the fecal mass toward the rectum. This can be observed by the aid of the X-ray in small animals, such as the cat, mouse or rat, after the injection of subnitrate of bismuth into the rectum. Stained particles of lycopodium, sawdust, etc., can even be observed through the intestinal walls of small animals.

This antiperistaltic movement cannot carry the ingesta forward in large masses, and cannot, therefore, be used as an explanation of the digestion of nutrient enemata.

Observations Concerning Cholelithiasis.—BOAS, Berlin (*Muenchener Medizinische Wochenschrift*, No. 15, 1902).—Much has been accomplished in recent years in determining the etiological factors involved in the development of gall-stones. Based upon animal experimentation and careful observation, these new theories are apt to be lasting. Unfortunately, progress in the diagnosis of cholelithiasis has not gone hand in hand with the pathogenesis. Atypical cases of gall-stones are still very rarely diagnosed by those moderately skilled in diagnosis. The author calls attention again to a point in diagnosis to which he referred several years ago, and which has not received proper consideration. At that time he stated that in cholelithiasis there is marked pain upon pressure in the region of the twelfth dorsal vertebra, two or three finger-breadths to the right of the spinal column, extending sometimes to the posterior axillary line, etc. The same exists in acute attacks, and continues for a long period after the acute period has passed. It can even exist for years during the latent period. The pain in the marginal and vesical region may have long since disappeared, while the dorsal pains remain. There are cases, however, in which this sign is absent. In determining the sensitiveness of the liver in inflammatory conditions, attention should be given to the following three regions: (a) the border of the

liver and the region of the gall-bladder; (b) the subcostal portion of the liver; (c) and the posterior surface.

In the differential diagnosis, duodenal ulcer, gastric ulcer, and hyperchlorhydria, intestinal neuroses, etc., must be duly considered.

In the discussion of the treatment, the author touches upon the use of Carlsbad water, the proper diet, forced breathing, and massage.

An Unusual Case of Pneumo-Thorax.—JACHMANN, Hamburg (*Zeitschrift fuer Klinische Medizin*, part 1-2, 1902), reports a case in which the physical findings, auscultation, percussion, the displacement of the heart, the position of the diaphragm on the right side, all pointed to a pneumo-thorax. The gradual development, the absence of subjective symptoms, the general condition of the patient, were rather inconsistent with this diagnosis. It was verified, however, by the X-ray. There was no evidence of any communication between the pleural sac and the external world; consequently there must have been an internal fistula. The etiology presented many difficulties. The absence of any history of tuberculosis, the favorable outcome, the absence of tubercle bacilli, etc., made it possible to exclude tuberculosis. There was no evidence or history of trauma. The gradual development, too, spoke against this.

The case must be considered as one of spontaneous origin, due to the development of a pleuro-pulmonary fistula. As was noted by the physical examination and the symptoms of the patient, the fistula closed for a period of ten days and the lung resumed its normal condition, after which time the fistula must have reopened, for air again gained entrance to the pleural sac. The point of chief interest in this case is the discrepancy between the subjective symptoms and the objective findings.

The author lays great stress upon the importance of the X-ray as a diagnostic aid in doubtful cases.

Heterochylia.—KORN, Berlin (*Archiv fuer Verdauungs-Krankheiten*, vol. viii, pt. 1-2).—This term was introduced by Hemmeter for the classification of those cases of nervous dyspepsia in which there are sudden and frequent changes in the gastric secretions. In such cases there have been observed within one week after test meals normal acidity, hyperacidity, and anacidity. The author reports a series of eleven cases in which such a condition prevailed.

In seven of these cases the possibility of any anatomical changes in the gastric mucosa could be absolutely excluded. The variation in the acidity must be explained by a nervous influence acting upon the secretions in both an augmentatory and an inhibitory way. In three cases in which there were pathologic changes there existed also this variation. Here there was no doubt a combination of organic and nervous involvement of the stomach.

In order to avoid false conclusions, frequent examinations of the gastric contents should be made in all doubtful cases.

The Clinical Importance of the Personal Factor in Disease.—DUCKWORTH, London (*Berliner Klinische Wochenschrift*, April 21, 1902).—The tendency of medical study at the beginning of this century is markedly set in the direction of the *quidquid irritans* and too little in that of the *quidquid irritabile*. Younger physicians are inclined to reckon without their hosts to a degree that is likely to retard the progress of medicine. Koch's discovery of the bacillus of tuberculosis has led physicians to regard the parasite as of greater importance than its host. The old doctrines of the several diatheses are considered to be inapplicable to these enlightened days. We are apt to consider the phases of disease from the standpoint of the pathological laboratory, rather than from that of the hospital wards.

Scrofula and tuberculosis are now considered identical. The author still

maintains, from his clinical studies, that one may be serofulous for life without ever becoming "tuberculized." A similar inadequate idea largely prevails in respect to rheumatic, gouty, and strumous tendencies. In all of these matters the personal factor is overlooked. The charlatan directs his efforts to the treatment of disease, while the true physician strives always to treat individual patients.

An Experimental Investigation Into the Causes and Treatment of Diabetes Mellitus.—CROFTON, Philadelphia (*American Journal of the Medical Sciences*, April, 1902).—Prompted by the investigations of Lepine, Arthus, Kraus, and others the author conducted a series of experiments with reference to the self-destruction of the blood-sugar, and the existence of a sugar-splitting ferment.

He found that the blood and lymph incorporate a substance that can destroy sugar; that this agent of the blood is contained in the corpuscles and not in the serum; it is unorganized and not dependent on the life of the cell. The glycolytic ferment of the blood is present in the white cells, and their degeneration must occur before the ferment can develop its powers.

The known ferments of the pancreas placed into sugar solutions do not possess the power of destroying it, even though they remain in contact for many months. The glycolytic ferment and solutions of trypsin are, however, so similar that they cannot be distinguished by known methods. For the present they must be considered identical.

One of the causes, if not the only cause, of diabetes is a reduction of glycolysis. In the present state of our knowledge we are not justified in assuming pancreatic disease in all cases of diabetes; it is possible that functional affections of the organ may exist during life that leaves no anatomical trace.

Based upon his experiments the author thinks that the following measures promise some success in the treatment of diabetes: (1) the infusion of chyle or of blood from a healthy animal; (2) the injection of leucocyte extracts; (3) the injection of trypsin; (4) the injection of vegetable glycolytic ferments. Experiments have, in a measure, demonstrated these to be plausible procedures. Others are now being conducted.

Three Cases of Meningitis in Which Kernig's Sign was Persistently Absent.—CLARK, Philadelphia (*American Journal of the Medical Sciences*, May, 1902).—In one case of acute cerebro-spinal lepto-meningitis, whose bacterial nature was not determined, and two cases of tubercular meningitis, Kernig's sign was persistently absent. There was no difficulty at any time to extend the leg beyond an angle of 150 degrees. This extension did not cause undue prominence of the hamstring tendons, nor apparently hurt the patient. These cases confirm the opinion that this sign is especially unreliable in tubercular meningitis.

Raynaud's Disease.—KING (*American Medicine*, May 17, 1902).—The disease is best defined as a vasomotor neurosis, dependent on an exaggeration of the excitomotor powers of the central nervous system, causing angiospasm in localized areas in various parts of the body, and characterized by three grades of intensity: local syncope, local asphyxia or cyanosis, and local gangrene. It is characterized by symmetrical gangrene of the extremities, though there are sometimes exceptions to this. In the case here reported it appeared first in the left great toe, then involving successively the right and left forefinger, the right great toe, and the right fourth toe. The patient also showed peculiar pulmonary symptoms which were interpreted as local syncope and cyanosis. There was also vertigo without palsy. The process continued for a period of two or three years. He suddenly lapsed into coma while engaged in some light manual labor and died shortly afterward. An autopsy was not permitted.

A Bilirubin Stone in an Echinococcus Cyst.—KRAUSZ, Budapest (*Wiener Klinische Rundschau*, No. 14, 1902), reports a case of echinococcus cyst of the liver in a young man twenty-one years of age. Ten liters of a dirty green liquid were removed through operation. The color gave the impression that there was an admixture of bile. The chemical test, however, did not corroborate this belief. The individual cysts were found to be sterile. Two days later three red pigmented concretions, weighing 7.5 grams, were liberated from the wound during irrigation. These in all probability came from a diverticulum of one of the bile ducts. An active inflammation was no doubt produced through the entrance of a small cyst into the bile ducts and a diverticulum resulted. Biliary concretions formed in the pocket which was in communication with the large cyst. The stones, therefore, were not liberated at once, but followed afterwards.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Rhinoplastic.—NELATON (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxviii, No. 14).—In this well-illustrated article is presented a method of making a new nose which seems, on paper at least, to possess advantages sufficient to recommend it over all those which have been practiced heretofore. The steps of the operation are the following: 1. An incision is made along the borders of the old nose, and the tissues which remain of it are swung toward the median line, where they are sewn together and thus form a base for the new structure. 2. A horseshoe shaped flap is cut from the frontal region (convexity upward) down to the bone, and then a saw is so placed upon the latter that running in its plane, the outer plate of the frontal bone will be removed, still attached to the soft structures. 3. The entire flap is divided into two lateral segments. 4. Each of these flaps is turned down to the bed already prepared for it, where both are sewn together in the median line, and then united at their outer edges to the skin where it was first incised at the borders of the old nose. Thus the new organ gains the unyielding support of the two bony plates which have been cut from the frontal plate, and in consequence of this fact, its shape is better preserved than can be the case if any foreign body be utilized, and certainly better than would have been the case if only a soft flap had been secured in any of the old ways.

The Surgical Treatment of Lung Diseases.—QUINCKE (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Bd. ix, Hft. 3).—The diseases which come under this category are distinctly the purulent ones; however, this does not include those of specific origin, such as tuberculosis and syphilis, since the mere opening and draining of one of these focii in the lung has no more effect than it would have in any other part of the body. A distinction must be drawn between purulent disease of the mucous membranes (bronchiectasis) and the same of the parenchyma, the latter being capable of localization, and hence amenable to surgical treatment. Lung surgery has been of slow development for several reasons: the number of focii is hard to determine, exact localization is difficult, bronchial drainage often solves the problem while the operator is debating. There are two chief considerations involved in the treatment of an abscess: (1) the emptying of the pus, (2) the obliteration of the cavity by scar tissue. This latter feature of the matter is different in the lung from what it is in any other tissue. Here the walls of a cavity cannot always be made to collapse, because

the elasticity of the tissue causes the granulating surfaces to be drawn toward the periphery of the organ, especially if the two pleural layers be adherent. In this very particular there exists a vast difference in the upper and lower lobes; in the former the tissues surrounding the lung are exceedingly resistant, while below, the diaphragm and long ribs are capable of considerable movement; hence, a cavity can, in many instances, be obliterated. As to drainage through the bronchii, the opposite holds good; by position the upper portion of a lung is better drained. Hence, the operative indications are different, according to the location of the abscess; if it be in the lower lobe, it is often sufficient to drain it, while in the upper, the principal consideration is to so mobilize the tissues surrounding the cavity that they can collapse, and allow it to heal through granulation. Elastic tissue in the sputum indicates that a cavity is forming progressively, but, on the other hand, the classical symptoms of cavity formation obtain only in the upper lobe, for the reason that cavities so situated are the only ones held well open in the way indicated. Auscultation and the "X-ray" are our best guides to a diagnosis in all these cases. We are more likely to meet with pleural adhesions in an acute than in a chronic case, and indeed it may be said in general that the prognosis in all acute cases is better than in the chronic, for the latter are so often complicated. Tuberculous cavities have no place in the consideration of this subject.

Epitheliomatous Degeneration of Old Osteomyelitic Focii.—BAUBY (*Archives Provinciales de Chirurgie*, Tome xi, No. 2).—Four of these interesting cases have come under the author's observation recently. In the first there was spontaneous fracture of the tibia, the site of the disease, but after exarticulation at the knee the patient recovered and was cured. Another patient who suffered a spontaneous fracture of the same bone, succumbed to a general carcinomatosis. The third was saved by a timely amputation at the knee. In the last case, a resection of the humerus, the conservatism of the surgeon was rewarded by a recurrence at the site. From the literature the author was able to collect but forty-nine of this kind of cases; still he considers, and correctly so, that they must be much more common than this statement would lead one to believe. In most instances the growth was superficial, and only at a late date invaded the depths of the bone. As so much scar tissue must be invaded, the progress of such a growth is necessarily slow and the prognosis, in consequence, is good. As regards diagnosis, it may be said that one is to regard with suspicion any old focus which, in an aged person, takes on an angry aspect after any injury; but the size attained, pain, spontaneous fracture, and the odor will generally determine the matter before the microscope is used.

Operable Brain Tumors.—v. BERGMANN (*Archiv fuer Klinische Chirurgie*, Bd. lxxv, Hft. 4).—This famous surgeon relates his experiences in this field for the two years 1900 and 1901. He commences by saying that the only growths which are really to be considered as operable are those which involve the motor area. In all the others there must exist an uncertainty, and the surgical treatment of them must be fraught with many unpleasant surprises for the surgeon. The first case of solid tumor related is one of a sarcoma which the author was able to so completely remove as to permanently cure the patient. Following this come the histories of three more which terminated fatally, though the diagnosis had been correctly made. The exactness with which all the histories are detailed is wonderful; and from the standpoint of diagnosis particularly this is an interesting and instructive article. The subject of operating at two sittings is discussed, and while the author has not made it a rule, still he admits that there are many cases in which the condition of the patient at the time of operation may make a fatal result less likely if the surgeon only exposes the dura at the first sitting, and defers the ablation of the tumor until the patient has had a few

days in which to recruit and recover from the primary hemorrhage. The operation is justly dreaded since twenty-five per cent. of all these patients die in consequence of it. Once v. Bergmann cut right into an angioma, and has repeatedly opened cysts which proved to be part of sarcomata.

The Technique of Amputations.—COWAN (*International Journal of Surgery*, May, 1902).—In his preliminary to a series of articles, the author avers that the first question to claim the surgeon's attention, after injury to an extremity should be, how to avoid amputation. However, conservatism may in some cases be a misnomer, as the following illustrates: A contusion to the thigh which did not tear the skin, ruptured the femoral artery and the consequent hemorrhage into the tissues compressed the collateral vessels so much that gangrene ensued, when incision and ligation of the femoral might have saved the leg. The two prime considerations in saving an extremity are the condition of the circulation, and the likelihood of its function being preserved.

Embolism of the Pulmonary Arteries Following Injuries and Surgical Operations.—LOTHEISSEN (*Beitraege zur Klinischen Chirurgie*, Bd. xxxii, Hft. 3).—Five such cases are reported from the author's actual experience, together with 61 which he has gathered from the literature. Of these 55 ended fatally. The causes were as follows: fracture 36, contusion 6, tendon or muscle tearing 4, surgical operations 20. Of these latter it may be said that frequently no connection can be traced between the operation and the fatal complication now under discussion. The cause of the thrombosis which results in embolism lies in a disposition of the blood to clotting; and this is often the result of anemia and of certain diseases like cholera which disturb the normal composition of the blood. At the same time slowing of the current from cardiac causes may result in the same thing. Then, on the other hand, changes in the vessel wall, as a result of fractures or other injuries and diseases, are prone to lead to thrombosis. Movements of a sudden or violent nature, during convalescence, may cause part of a thrombus to be torn loose, or massage may accomplish the same undesirable result. It is worthy of note that most of these troubles arise in the lower extremity. The principal symptom is a sudden, profound dyspnea, which can simulate but one thing, viz., closure of a coronary artery; but in the latter case the patient will give a history of similar attacks. The treatment is first prophylactic, as will be understood from the above. Camphor may do some good, and morphine is of value after an attack, it superinducing the quiet so essential to a proper distribution of blood to the vital organs.

Posterior Gastro-Enterostomy.—TARRIER (*Revue de Chirurgie*, No. 4, 1902).—The technique is first described, and differs in no particular from that practiced by most of those who believe in two rows of continued sutures. The author states that it usually requires about one hour for him to perform the operation. His results leave but little to be desired, in view of the fact that of his last twenty-two patients operated upon but one died. And this seems all the more remarkable when we consider that eight of these individuals were afflicted with cancer. The dreaded "circulus vitiosus" was not observed, and the author claims that it can be the result of faulty technique alone. Great stress is laid by him upon the proper treatment of the patient before and after the operation. Lavage is indispensable in dilatation, and must be done at least once just before the operation in every case. In addition, he gives his patient a large saline infusion while on the table, but never uses cathartics before the operation, since the patient is sickened and weakened thereby. The post-operative treatment consists principally in proper care of the digestive tract; lavage is practiced if there are gastric symptoms, though in this the author does not go as far as do

Lindner and many other surgeons, who wash every case on the evening following the operation, to remove blood clots and gastric accumulations. A rectal tube is inserted to relieve gaseous distension, and the bowels are moved by an enema in a few days.

Carcinoma and Skin Changes.—HOLLAENDER (*Centralblatt fuer Chirurgie*, April 26, 1902).—What the author has to say of the skin changes which accompany or follow cancer, applies to all cancers so deeply seated that they cannot be felt, and particularly to intestinal growths. At such a time one is apt to find scattered over the otherwise healthy skin a multitude of elevated red spots varying in size from a pin-head to a pea. They do not disappear on pressure and their nature has been determined to be that of capillary aneurisms or small hemorrhages, according to Hollaender. (The author's pathological anatomy is not quite clear.) This phenomenon is valuable only when the spots appear suddenly and in great numbers. Warts and pigmentation seem also to betoken cancer under certain circumstances; particularly is this true when the warts are extensive and when the pigmentation is in the vicinity of the lesion which is suspected to be malignant.

Intestinal Suture.—MACLAREN (*Annals of Surgery*, May, 1902).—Five cases were treated by different suture methods and the results are compared in an interesting way. In the first case Lembert sutures were introduced over the O'Hara clamp with good results. A second gut was united end-to-end by a double silk continuous suture, and the patient made a satisfactory recovery. In the third case the intestine was merely sewn longitudinally over a fistula. In the next patient the Connell end-to-end suture followed a resection, and the author describes the appearance of the bowel as being the best of his experience. This patient recovered. Case No. 5 was a gastro-enterostomy with the Connell suture, and the writer seems as well pleased as he did with its use in the instance last mentioned.

The Observation on the Human Subject of a Thiry Fistula.—NAGANO (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Bd. ix, Hft. 3).—The patient was one in whom v. Mikulicz had commenced the treatment of extrophy of the bladder, by "exclusion" of a portion of the small intestine, the same having been closed at one end and the other left open on the abdominal wound. The fistula thus produced furnished the author the field for his studies. This "excluded" portion of the intestine was found to move but little at 5 o'clock in the morning, but in the afternoon it was very active. A small ball thrust into it for any distance up to 3.5 cm. was expelled at once by the contraction of the abdominal muscles; but when introduced beyond the depth mentioned, the ball was drawn further in until pain was felt when it impinged upon the closed end of the gut. A rod introduced, was caused to rotate; and this movement was increased by heat and slowed by cold. The temperature in the gut was always higher than in the patient's axilla. There was much more secretion during the day than at night, and the same was always alkaline. Albumines and fats were not acted upon by the secretion, and starch but slightly. After the introduction of cane sugar, diastase and maltose were found in the gut. Iodide of potassium, common salt and water were freely absorbed; as were cane sugar, maltose and milk sugar without the action of any ferment. Thus it will be seen that the intestine of the dog and that of the human behave in the same manner as regards secretion and absorption.

Subluxation of the Inferior Maxilla for the Prevention of Chloroform Syncope.—VALERY (*Gazette des Hopitaux*, No. 49, 1902).—The author does not exert simple continued traction upon the maxilla, as is common in our clinics, but does this rhythmically between the periods at which he allows the drops of chloroform

to fall upon the mask. For his method he claims the advantage that regular inspiration is excited, and further that the mucus is thus much better drained away.

The Gasserian Ganglion Operation.—LEXER (*Archiv fuer klinische Chirurgie*, Bd. ixv, Hft. 4).—The author bases his report upon the result of fifteen extirpations of the ganglion, done after the method of Krause. The remarkable success which has crowned his efforts cannot be better shown than by the fact that he lost but one of his patients. This was an old woman who died four days after the procedure, of meningitis; at the autopsy there developed the interesting circumstance that a brain tumor had caused all the trouble. The author takes occasion to remark in this connection, that the disease can always be regarded as central where, after removal of the ganglion with the clinical consequences of the same, pain persists nevertheless. The prognosis in hysterical tri-facial neuralgia is not improved by an operation, hence one must select his cases with the utmost care. In his technique Lexer no longer makes an osteoplastic flap while following the general idea of Krause; he constructs a smaller round bone opening, and has enlarged the same downward into the foramen ovale, in a number of instances. In this way the temporal lobe is not so exposed to the dangerous pressure of the spatula, as in cases where the high opening is used. Lexer always ligates the middle meningeal double and sits the patient up if hemorrhage becomes alarming. In one case pain has returned on the operated side, while in two it has come back on the opposite side.

A New Coupler for Rapid Intestinal Anastomosis.—KANE (*Journal of the American Medical Association*, April 19, 1902).—This is a simple and ingenious device for uniting the gut end-to-end without the introduction of a suture. The end of each segment is tied over a hollow cylinder and then the two cylinders are drawn together by a thread over another cylinder, and the anastomosis is complete. The apparatus is made of aluminum, so is light, and from the inventor's description, would seem to be very easy of application. It has been tried once on the living, the patient dying three days later of other causes, but no fatality occurred following its use upon several animals!

The Technique of the Resection of the Prolapsed Rectum.—HENLE (*Beitraege zur klinischen Chirurgie*, Bd. xxxii, Hft. 3).—The author refers in no very complimentary manner to the work of his superior, v. Mikulicz, during the past ten years, saying that the six cases of the latter resulted in three perfect results, and three others which were wholly unsatisfactory, one of the latter patients dying as a consequence of the operation. The main fault of the great Breslau surgeon seems to have been that he pulled down too much, thus incurring too great a tension on his sutures, and so retraction. The author's technique consists in a circular incision at the skin margin of the anus, after which the peritoneum is opened, prolapsed coils of intestines pushed up, and the mesocolon ligated, thus allowing the rectum to be straightened out and completely pulled down. The skin is now sutured to the serosa of the gut, either completely, or else tampons are inserted between the sutures; the former method seems to find favor in the author's eyes. The redundant gut is now amputated transversely and the stump sewn over a large ring, or else a glass tube is inserted into the rectum and a heavy ligature bound around the gut. However, this latter idea cannot be recommended, since solid feces are likely to clog the tube and force it out too soon. The wound is dressed by wrapping iodoform gauze around the protrusion and thus infection, with consequent pulling out of stitches, and retraction, prevented.

A Case of Death Following Nephrectomy.—POUSSON (*Bulletins et mémoires de la Société de Chirurgie de Paris* Tome xxviii, No. 12.)—In the surgery of the kidney, we are better informed of the exact organic result than can be the case in the treatment of any other viscus. However, the very diagnostic methods at our command create what may prove to be a false security in certain cases. In this instance, a unilateral nephrolithiasis was diagnosed, found and the diseased organ removed; when, to the author's surprise, the patient, who had eliminated a good quantity of urine during the first twenty-four hours, suddenly ceased to do so and died fifty hours after the procedure. At the autopsy the other kidney was seen to be acutely diseased, a condition which the urinalysis had not revealed if it were present before the operation.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

The Prevention of Sea-Sickness by Means of Orexin Tannate.—C. V. WILD (*Archiv f. Schiffs- und Tropen-Hygiene*, vol. vi, p. 24; *Die Heilkunde*, 1902, p. 165).—The author administers orexin tannate for the prevention of sea-sickness as follows: 0.5 g. (gr. viii) are taken in 250 c. c. fluid (such as milk, tea, bouillon) three hours before the ship sails, and two hours later a plentiful meal is to be taken. His observations have brought him to the following conclusions:

1. That people usually subject to sea-sickness are free from illness at least for several days, if the drug is taken in exactly the manner described above;

2. That the illness is not prevented where the drug is taken in any other manner;

3. That in one case, while the drug prevented illness on the day of sailing, sea-sickness set in on the following day. He ascribes this ill result to the fact that in this case the meal taken two hours after the administration of the orexin tannate was insufficient.

Dionin in Diseases of the Respiratory Tract.—AUG. SCHERER (*Centralbl. f. d. ges. Ther.*, 1902, p. 283).—The chief effect of the administration of dionin consists in its action as a respiratory sedative. The dose is 0.02–0.03 g. (gr. $\frac{1}{3}$ – $\frac{1}{2}$) two to four times daily. The cough often disappears in four or five days, without the use of any other narcotic. It has several advantages over morphine—a dionin habit is never formed; it is rarely necessary to increase the dose, even after prolonged use; the expectoration is not diminished or made difficult, as is so often the case after the use of morphine. Patients who complain of insomnia on account of their cough often sleep well after the administration of gr. $\frac{1}{3}$ of dionin, without having headache or other ill after-effects on awakening. Sometimes, however, the drug fails to act; in such cases an increase of the dose does not lead to greater efficiency, and another sedative must be used. The pain of dysmenorrhea is often relieved by dionin; the same is true of headache. The author failed to obtain a beneficial action of the drug in cases of painful deglutition due to laryngeal tuberculosis. In brief, dionin, while it occasionally leaves us in the lurch, is a valuable addition to our armamentarium.

A Preliminary Note on the "Silver Treatment" of Phthisis by Intravenous Injections of Protargol.—W. EWART (*The Lancet*, 1902, No. 5).—The use of protargol in phthisis was suggested to the writer by Mays's successful use of silver nitrate injections in this disease. His results were decidedly better than

those of Mays, and at least as good as those obtained by Maguire by means of formaldehyde. There was always a noticeable subjective improvement which went hand in hand with a decided improvement in appearance and strength. The cough and expectoration diminished and the sputum, losing its characteristic tuberculous appearance, became more and more catarrhal in appearance and finally consisted merely of transparent mucus. The end result of the treatment was always characterized by a reduction of temperature, although this fall was often interrupted by febrile exacerbations in the course of the treatment.

The technique is as follows: About 3 iss of normal salt solution containing gr. iss to gr. iiss of protargol are injected into a vein, followed by the injection through the same needle of some more salt solution to prevent injury to the tissues. An hour after the injection a chill usually ensues, followed by a rapid rise of temperature lasting half an hour. After this has disappeared the patient feels permanently better; no long-continued ill after-effects were ever noted. Only in one case was the injection followed by a brief nephritis. In another case, on the other hand, an albuminuria of long standing was markedly ameliorated, while in a third case an obstinate hemoptysis ceased after the first injection. Twelve to fifteen injections usually suffice. They are best given every other day, though in some cases they were given daily.

As soon as the beneficial effects begin to show themselves, other therapeutic measures should be used. Of these the most valuable are general massage, moderate exercise (especially respiratory gymnastics), overfeeding and care of the skin. As a result of this combined treatment, patients who had entered the hospital in a very bad condition, could be discharged after a few weeks very much improved and in good condition to begin the fresh air treatment. After a short stay in the country, they returned home greatly benefited and with good prospects of a permanent cure.

Adrenalin in Internal Medicine.—A. L. BENEDICT (*Therap. Monatsh.*, 1902, No. 4).—The value of suprarenal extract as a cardiac tonic and as a vaso-constrictor in cases of general relaxation of the vascular system, associated with constipation, dyspepsia, and gastropnoia, is generally conceded. The writer has found that all the valuable properties of suprarenal extract when administered internally reside also in its active principle, adrenalin. He uses a one per cent. watery solution, one drop at a dose, so that only grain 1-100 is taken at a time. Of the 1-1000 solution used in this country ten drops would be the dose. The therapeutic effect soon becomes evident in a strengthening of the pulse. If, as usually happens after the drug has been used two weeks, the pulse becomes hard, the treatment must be discontinued for a week or two. For theoretical reasons (lest the constriction of the gastric vessels interfere with digestion) he gives the adrenalin several hours after meals; in cases, however, in which he deviated from this rule he failed to notice any unfavorable influence upon digestion. In one case of frequently repeated hemorrhage from a gastric ulcer, the beneficial effect of adrenalin was prompt.

Carbonate of Creosote in Pneumonia.—W. H. THOMSON (*New England Med. Monthly*, 1902, No. 5).—In the *Medical Record* of November 2, 1901, Dr. Leonard Weber reports nine cases of pneumonia treated by creosotal, or the carbonate of creosote, with one death. Dr. Thomson now reports eighteen cases treated by the same drug, also with one death. Of these, fifteen were males and three females; their ages ranged from ten years to forty-five. Both lungs were involved in three patients, all of whom recovered, while of the remainder, six had the right lung attacked and nine the left. The patient that died was an alcoholic, though not immoderately so. The usual formula for administering the drug was:

℞	Creosot. carbonat	3 iv
	Glycerini	3 j
	Aq. menthæ	ad 0 ss
M.	Dose.—Tablespoonful in water every two hours if awake.	

For the histories of the cases, which are not without interest, the reader must be referred to the original article.

“Why Does Brain Syphilis Seem to Resist Treatment?”—O. ZIEMSEN (*Berl. Klin. Wochenschr.*, 1901, No. 18).—The above question is answered by Ziemsen by the assertion that many physicians neglect to treat brain syphilis sufficiently energetically, owing to the belief that the excessive administration of mercury is apt to increase or even produce nervous lesions. This he denies most emphatically. A second explanation, according to Ziemssen, lies in the difficulty of diagnosing brain syphilis in its early stages. This is the more so since experience shows that it is just in cases with slight and indefinite primary and secondary lesions that we are most apt to meet with this complication. Such cases are usually not thoroughly treated, and he advises very energetic procedures on even the slightest manifestation of cerebral involvement. In the third place, physicians are often discouraged by the failure of the specific treatment in brain syphilis, since the symptoms often grow more severe during the course of the treatment. The explanation of this observation lies in the fact that the absorption of a gumma, a sclerosis, or even an endarteritis, produces a disturbance of the pressure equilibrium of the cerebral circulation. When, however, the resorption is complete, this circulatory equilibrium quickly readjusts itself. The essential feature of a successful treatment of brain syphilis, according to Ziemsen, is a mercurial course as intense and as prolonged as possible, accompanied by the simultaneous administration of iodide of potash in large doses. The inunction method alone permits the use of maximal doses of mercury without risk to the patient.

Aphrodisiac Formule.—(*Centralbl. f. d. ges. Therap.*, 1902, p. 318.)—The following formule have been found useful for stimulating sexual desire:

1. ℞ Cornutin. citric 0.15
Argill. alb 7.0
Mucil. gum. tragacanth q. s.
M. et f. pilul. No. x. D. S.—One pill twice daily.
2. ℞ Mentholi 0.1
Extr. cimicifug fl 25.0
M. D. S.—Twenty drops three times daily.
3. ℞ Aur. chlorat 0.5
Aq. dest ad 20.0
Dtr. ad vitr. nigr.
M. D. S.—Twenty drops three times daily, increasing the dose until fifty drops are taken three times daily.
4. ℞ Extr. fl. staphysagriæ 7.5
Extr. damian 30.0
Aq. dest 150.0
M. D. S.—One tablespoonful three times daily.
5. ℞ Caryophyll.,
Croc. orient.,
Zingiberis aa 4.0
Moschi,
Ambr. gris aa 0.4
M. f. p. Div. in dos. æq. No. xii. D. S.—One powder morning and evening.
6. ℞ Extr. muir. puam fl 15.0
D. S.—Twenty drops three times daily.

7. **R** Strychnin. nitr.,
 Phosphori aa 0.015
 Extr. cannab. ind. 0.12
 Limatur. ferr. 2.0
 Rad. rhei chin. 0.4
 Extr. quassia q s.
 M. et f. pilul. No. xxx. D. S.—One pill three times daily before meals.
8. **R** Johimbini 0.005
 Sacchari 0.90
 M. f. p. Dtr. tal. dos. No. xii. D. S.—Three times daily one powder.
9. **R** Zinc. phosphoric,
 Extr. nucis vomie aa 0.3
 Extr. quass.,
 Extr. liquorit aa q. s.
 M. et f. pilul. No. xx. D. S.—One pill three times daily.
10. **R** Rad. panac. ginseng 1.0
 Fruct. vanill 2.0
 Tr. ambr. gtt. 1
 Sacchari 30.0
 Mucil. gum. acac q. s.
 M. et f. pastill. No. lx. D. S.—Take two or three pastilles three times daily.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Tetanus and Vaccination—An Analytical Study of Ninety-Five Cases of This Rare Complication.—JOS. MCFARLAND (*The Journal of Medical Research*, May, 1902).—McFarland collects ninety-five cases of tetanus complicating vaccination and endeavors to show that this untoward accident is a result of contaminated vaccine virus. He denies that there is any great chance of tetanus occurring from accidental entrance of tetanus bacilli into a vaccination wound; that the occurrence of this complication depends upon a local prevalence of the tetanus bacillus, as was claimed in the Camden, New Jersey, epidemic, and that the use of a shield as a protection to the vaccination wound has anything to do with the production of the tetanus infection in the reported cases is also denied by him. He gives a tabulated picture of forty cases of tetanus complicating vaccination, designating the brands of virus used by letters, not by the names of the manufacturing companies. He shows that tetanus occurred thirty times in the case of the virus made by the firm "E," and only ten times in the cases of all the other brands, numbering six. Hence he concludes that the infection was contained in the vaccine virus "E." He admits, however, that the brand "E" was probably used millions of times without the occurrence of tetanus, for this was a popular make of virus in this country.

He concludes that while tetanus has been looked upon as a rare complication of vaccination, the number of cases recently reported is out of all proportion to what has been observed heretofore. The cases are chiefly American and occur scattered throughout the eastern United States and Canada. They have nothing to do with atmospheric, telluric or seasonal conditions. Although they occur in small numbers after the use of various viruses, an overwhelming proportion has occurred after the use of a particular virus. The tetanus bacillus may be present in the virus in small numbers, being derived from the manure and hay. Occasionally the number of bacilli becomes greater than usual through carelessness or accident. The future avoidance of the complication is to be sought for in greater care in the preparation of the vaccine virus.

On Adrenalin Glycosuria and Allied Forms of Glycosuria.—C. A. HERTER (*The Medical News*, May 10, 1902).—Intravenous injections of adrenalin produce glycosuria, as do subcutaneous injections. A rise in blood pressure sometimes accompanies the glycosuria. In moderate size dogs, a dose of from 4 to 6 c. c. of adrenalin will always produce glycosuria. Usually from 3 to 6 per cent. of sugar appears in the urine within the hour after injection. No glycosuria is produced by administration per oram. The glycosuria after a moderate intraperitoneal dose of adrenalin lasts somewhat less than twenty-four hours. Owing to the fact that the high percentage of sugar first observed after the injection is not steadily maintained, the total amount excreted is inconsiderable. It is probable, though not certain, that the form of sugar excreted in this adrenalin glycosuria is glucose, being dextro-rotatory and producing a glucosazon without difficulty.

Numerous observations on the sugar count of the blood before and after the production of adrenalin glycosuria indicate that in well-fed animals there is regularly an increase in the blood sugar. In general it can be said that the largest quantities of sugar have been observed in well-nourished dogs that had been recently fed. Observations were made in regard to the effects of repeated injections of adrenalin in four dogs, of which only three were normal, the fourth having had the spleen and one-half the pancreas removed at previous operations. Injections were made every third day, with gradually increasing doses. The usual symptoms abated and less sugar was excreted later on than at the beginning of the experiments. In the splenectomized dog, sugar failed to appear in the urine after the last three injections. It seems, then, that a condition of gradual tolerance is acquired by these dogs. Such a tolerance has been observed with morphine, and it depends, apparently, on an increased oxidizing activity on the part of the cells.

These dogs show the following symptoms after injection: First, vomiting after a few minutes; then, after half hour, comes a period of intense excitement and restlessness, lasting about an hour. This is followed by a period of prostration, and on the day following the injection there is loss of appetite. After fatal doses (10 c. c. in a dog of from 5 to 8 kilos) the symptoms are similar, but more intense.

The application of adrenalin to the surface of the pancreas in dogs produced a quick glycosuria. It was plainly shown that the local application of adrenalin to the pancreas is distinctly more effective in causing glycosuria than is its contact with the liver, spleen or brain.

The Bacteriology of Erysipelas.—G. E. PFAHLER (*The Phila. Med. Journal*, April 19, 1902).—The writer claims to have found a "brand new" organism that is specific for erysipelatos infections. He writes that he has found a diplococcus in pure culture in sixty-six cases out of ninety-eight studied.

Skin cultures were made in the routine way. The writer states that in the majority of cases some kind of an antiseptic had been applied to the site of infection prior to taking material for inoculation work. He nicely explains his consecutive finding of the diplococcus in so many cases in pure culture by reason of this fact, *i. e.*, that the antiseptic killed off all the other skin organisms, leaving only the "diplococcus" which, shall we say, will "be nameless nevermore or evermore?" Erysipelatos manifestations were produced in rabbits by subcutaneous inoculations with this diplococcus.

What more can we wish to prove that this "diplococcus" is the real cause of erysipelas? This investigator would ruthlessly batter down our preconceived conviction that the streptococcus *erysipelatis* Fehleisenii is the agent in these cases. Shall we have this conviction battered down and cast aside? Conservatism prompts us to say no, and to gently remind the above investigator that the streptococcus referred to has been found in erysipelatos infections repeatedly

and has been found to be capable of reproducing erysipelatous lesions so often that we would fain have additional proof that this "diplococcus" is constantly present in erysipelas before we accept it as the new etiologic agent for this disease. Might not the investigator's argument concerning the use of the antiseptic explain why he did not get a culture of the streptococcus erysipelatis, *e. g.*, that the diplococcus survived the antiseptic treatment while the real agent of the disease was destroyed by it. And again, we must take into consideration the fact that this diplococcus might be a streptococcus "in disguise."

Value of the Justus Test, with Report of Cases.—HENRY TUCKER (*The Phila. Med. Journal*, May 10, 1902).—This test, first described by Dr. Jacob Justus, an assistant in Schwimmer's clinic at Buda-Pest, is based upon the fact that mercury given either by subcutaneous or intravenous injection, or by inunction, will cause a diminution in the hemoglobin of the blood. In the healthy or non-syphilitic individual nature rapidly replaces this loss, but in syphilitics the loss will not be immediately compensated, so that an examination made twenty-four hours after giving the drug will show a fall of from 10 to 20 per cent. in the hemoglobin.

Tucker examined twenty-seven cases of mixed venereal diseases, syphilitic ulcers, chancreoid, herpes, tuberculosis, and pustulo-crustaceous syphilide, with the following results: He found that the reaction occurred as well with non-syphilitic individuals as with the truly syphilitic; that in the very condition which most resembled a syphilitic ulcer, *i. e.*, the chancreoid ulcer, we get the Justus reaction; hence, he concludes that the Justus test has no practical value.

The Justus Test for Syphilis, with Report of Cases.—WM. E. HUGER (*The Phila. Med. Journal*, May 10, 1902).—Huger gives the results of the application of the Justus blood test to a number of cases, syphilis, chancreoid ulcers; he found that there are enough negative results in the cases of chancres to show that the test is wholly unreliable, and moreover, one positive result among the chancreoid cases detracts still more from the possible value of the reaction.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Extraordinary Case of Trauma in a Pregnant Woman.—M. J. SCHUI (*Philad. Med. Jour.*, May 3, 1902).—A woman, twenty-nine years of age, four months pregnant, fell five stories out of a window. When picked up she was found in a sitting position. She was in a comatose condition. Patient recovered from the first shock in less than twenty-four hours, and then complained of pain in the left side in the region of the left kidney. The urine contained a very large quantity of blood. Temperature was 90°, pulse 130. Twenty-four hours later the pulse was about 100. An exploratory laparotomy was refrained from on account of her pulse and general condition improving. On the fourth day there was no more blood found in the urine and temperature and pulse were normal. She made a prompt recovery. Five and a half months after the accident she gave birth to a living child.

Fracture of the Base of the Skull in a Woman Seven Months Pregnant—Delivery at Full Term.—VARNIER (*Compt. rend. de la soc. d'obstr., de gyn. et de ped.*,

Paris, June, 1900; *rev. Centralbl. fuer Chirurgie*, No. 47, 1900).—Varnier reports the case of a woman, eighteen years of age, seven months pregnant, who jumped from a third-story window to the street. She was found unconscious, with a hemorrhage from the left ear, nose and mouth. Two days later the left nervus abducens became paralyzed. Eight days after the accident consciousness returned. During all this time there were no abnormal symptoms on the part of the uterus observed. The fetal heart-beatings remained normal. Patient left the bed four weeks afterwards. She was later delivered of a full-term child. The author concludes his paper with a review of the literature. A similar case was reported by Carstens. There are two cases of fracture of the skull in pregnant women on record in which trepanation was performed. In both cases the pregnancy took a normal course.

Cesarean Section in a Case of Multiple Incised Wounds in the Uterus.—S. A. MIKONOFF (*Wratch*, December 22, 1901; *rev. Phila. Med. Jour.*, March 8, 1902).—The author reports the case of a girl, sixteen years old, who was received at the hospital in an unconscious state, with eleven incised wounds. Two of them penetrated the lung and three the abdominal wall. The largest wound of the abdomen was twelve cm. long and on the median line below the umbilicus. Through it protruded the wounded pregnant uterus, and through the latter the shoulder of the child. Through another wound above the anterior superior spine of the ileum protruded several loops of the small intestines, and between them the arm of the child. The intestines were scattered on the extremely dirty shirt. A cesarean section was performed at once and the wounds closed. The operation lasted two hours, during which time 1000 grams of physiologic salt solution were injected. The girl made an uninterrupted recovery save a pleurisy which lasted eight days and was accompanied by a slight elevation of temperature. The case illustrates what may be accomplished by timely surgical aid even in apparently hopeless cases.

Gunshot Wounds of the Pregnant Uterus.—G. GELLHORN (*St. Louis Med. Review*, November 7 and 9, 1901).—The author was able to collect from literature the reports of seventeen authentic cases of gunshot wounds of the pregnant uterus, the histories of all of which he gives in brief. Based upon a study of the pathological findings, the symptoms, the treatment resorted to and the final outcome, the writer draws some interesting conclusions in regard to the pathology, symptomatology, diagnosis, prognosis and treatment of these injuries. For treatment, the rule is laid down that in every case of gunshot wound of the pregnant uterus cesarean section should be performed at once.

The Traumatisms of Pregnancy.—DENSLOW LEWIS (*Med. Rec.*, April 12, 1902).—The consideration of the traumatisms of pregnancy divides itself into a consideration of those injuries which are due to attempts at an interruption of the pregnancy and a consideration of injuries which occur incidentally, often by accident. Both kinds of injuries are illustrated by the writer with a large number of interesting, sometimes unique histories of cases compiled from literature. Regarding the attempt of criminal abortion, it is a remarkable fact that, in spite of serious injuries, the fecundated ovum may cling to its attachment with great tenacity. In other cases of this sort seemingly trivial procedures suffice, sometimes weeks afterwards, to cause an interruption of the pregnancy. The greatest danger in criminal abortion results from infection. As regards treatment of these cases, the author brings forth the following conclusions: Only in rare instances where the fetal envelope is not injured and the condition of the patient is good, the case may be let alone. If the evidence of serious traumatism is plainly manifest, active measures have to be resorted to. If it is probable that the foreign body used for bringing forth abortion is retained in the

uterus or if the abortion is an incomplete one, the uterus has to be emptied at once. The writer opposes the use of the vaginal or intrauterine douche, and recommends strongly packing the uterus with gauze, after Dührssen. If the foreign body has escaped into the peritoneal cavity, laparotomy must be performed at once. In certain cases of mutilation or ulceration or infection, hysterectomy may be justified.

The traumatisms of pregnancy due to direct or indirect violence occur from falls, beating, lifting, jumping, crushing, kicks, or they are the result of injuries due to gunshots, knife, pitchfork, nail or cattle-horn. In cases of this kind, in which the patient is first seen several days after the accident, peritoneal surfaces may have become agglutinated, effusion may have subsided and a watchful expectancy may be sufficient; altogether the interests of the patients, however, are better conserved by an immediate abdominal incision than by trusting to chance. Sequelæ of a serious character, such as hemorrhage, intestinal rupture, infection, etc., may occur within the abdominal cavity without manifesting themselves by pathognomonic symptoms until too late. Even if the serious internal injury which is sought for at the operation is not found, it cannot be said that an abdominal section, as performed to-day, would have added materially to the risk. At the operation the extent of the traumatism should be accurately determined. Conservative cesarean section will have to be performed in many cases. In some instances, however, the Porro operation will be preferable.

Extrauterine Pregnancy After Treatment for Sterility.—W. GILL WYLIE (Woman's Hospital Society, New York, meeting January 28, 1902).—The speaker reported four cases of ectopic pregnancy following treatment with the intrauterine hard-rubber drainage tube. He is inclined to see no causal connection between treatment and the pathological condition of the subsequent pregnancy.

Deciduoma Malignum—A Clinical Review.—LOUIS J. LADINSKY (*Am. Journ. of Obstetr.*, April, 1902).—In this elaborate paper the author gives the detailed report of a case of deciduoma malignum observed by him. Based upon a careful study of the so far recorded one hundred and thirty-two cases, the histories of which are given in brief, he concludes his essay with a consideration of the etiology, symptomatology, diagnosis and treatment of this disease. The clinical features which in the author's opinion aid in arriving at a diagnosis are summarized as follows: 1. History of recent parturition or abortion, especially if a hydatid mole has been discharged or placenta retained. 2. Profuse hemorrhage occurring at irregular intervals without apparent cause and not amenable to the ordinary means of treatment, and which recur in spite of repeated curettage; the presence of a constant sanguineous discharge during the intervals of hemorrhage. 3. A persistently large and hypertrophic uterus and cervix, with patulous os. 4. Pain in the pelvis. 5. Anemia, rapid loss of flesh and strength and cachexia. 6. Characteristic nodule in interior of uterus in the early stages. 7. The presence of metastatic deposits, especially in the vagina and lungs, the latter producing cough and bloody expectoration.

The prognosis is the most fatal of all malignant neoplasms of the uterus, because of its very rapid development and exceeding proneness to early metastases and recurrence.

The only feasible treatment is complete extirpation of the uterus and vaginal metastasis, if present, as soon as the diagnosis is made. The author states that he agrees with Neumann, of Vienna, that as a preventive measure the uterus should be extirpated in every case in which a microscopical examination of the cysts of a discharged hydatid mole shows an atypical proliferation of the cells, or scrapings from the uterus exhibit the slightest indication of malignant degeneration. [The reader will find a more detailed consideration of Dr. Neumann's opinion in this matter in an original article by him printed at another place in this issue.—ED.]

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Deformities Due to Muscular Paralysis; Methods of Production; Possibilities in Tendon Transplantation; Combinations that Have Been Made to Correct Deformity.—WISNER R. TOWNSEND, M. D. (*N. Y. Med. Jour.*, vol. lxxv, No. 18).—The production of the deformity is due to several causes: 1. Gravity is the primary and important factor in producing many deformities. 2. The action of the non-paralyzed muscles. 3. The arrested development and growth of all the tissues in proximity to the paralyzed muscles. 4. The results of weight applied to weakened structures. 5. All other causes, such as faulty braces, imperfect operations, and diseases producing muscular and bony changes. In the endeavor to correct these deformities by tendon transplantation we may attempt to improve either position or function, or both. A paralyzed muscle may be attached to periosteum or bone or muscle or ligament, and used to hold the foot in corrected position, without any hope of function; but non-paralyzed muscles must be used if we desire functional return. In the lower extremity, where opportunity is more frequently given to transplant tendons, the weight of the body is a factor that has not been sufficiently considered in most cases, and for a long time after operation apparatus should be used to prevent recurrence of the deformity. The subsequent development of the muscles and tendons has not been properly looked after in many instances, as muscles that have been inactive for years need long and careful treatment if they are to be expected to perform active movements; also the relative strength of the muscles must be taken into consideration. The ordinary laws of mechanics cannot be defied, and the manner in which the muscles act to perform their work must be studied. Arthrodesis is a valuable adjunct in correcting deformities due to paralysis.

The author gives a full list of the operations which have been done, with the variations of tendon transfer for the various conditions. The lower leg offers the largest field, and many combinations have been used; but the knee, where the sartorius is the only remaining muscle of the anterior group, the shoulder, the forearm, elbow and wrist have been successfully treated. A more recent departure has been the suturing of the tendon of the healthy muscle directly to the bone or periosteum where the power is needed, this giving great security, with no atrophied tissues used. The contracted tendons are also advantageously lengthened instead of completely severing them with a tenotomy, when these structures are intended to take on their original function immediately. The most important of the numerous articles on this subject are abstracted by the author.

Operation for the Relief of Paralytic Deformities, with Special Reference to Tendon Transplantation.—ROYAL WHITMAN (*N. Y. Med. Jour.*, vol. lxxv, No. 18).—As in 80 per cent. of this class of cases the lower extremity is involved, the treatment refers primarily to the disabilities of the lower extremity caused by anterior poliomyelitis. The operation of tendon transplantation dates back twenty years, but it is only recently that there has been a very general exploitation of the possibilities of the procedure. Its actual worth in orthopedic treatment is, however, as yet undetermined. Practical cure is only possible in those cases in which the paralysis is restricted to one of the weaker muscles. Successful treatment is not synonymous with cure; on the contrary, some of the most satisfactory results are those in which the main object of the procedure has been primarily to remove a distorting force, the actual transplantation being of secondary importance. Many results of tendon transplantation are reported a few

months after the operation, with the idea that further functional improvement may be expected with the lapse of time, whereas in most instances the contrary is the fact. The standard by which to test the results of tendon transplantation as a means of cure must be normal function. As regards the foot, for example, the ability to carry out the normal movements and to assume the normal postures when in use. From this standpoint one must conclude that the operation is essentially palliative rather than curative, and that in most instances it will supplement, rather than supplant, mechanical support. Artheodesis or artificial ankylosis was originally introduced that the patient might dispense with apparatus by changing a dangling, insecure support to a rigid one. The field is very limited, and as a rule should only be performed in later adolescence or adult life, because stiffened joints before this period usually become distorted unless additional support is applied.

Misapplied Mechanical Support to Weak Ankles of Children.—H. AUGUST WILSON (*Annals of Surgery*, vol. xxxv, No. 3).—The author calls attention to the fact that the foot best performs its functions when it has been freest from restraint, and that the natural foot can be quickly crippled into inefficiency by high counters, corset shoes, arch-raisers, wedges and elastic anklets. The natural foot when burdened with misapplied mechanics is rendered weak, and therefore susceptible of sustaining injury, such as sprains and the formation of bunions, flat feet, wobble joints, etc.

The natural foot in a constitutionally weak or rhachitic child may demand mechanical aids specially adapted to the individual requirements and peculiarities of the case.

It is urged as the duty of the medical profession to discourage the indiscriminate use of high counters, corset shoes, elastic anklets, arch-raisers and sole-wedging, which are known to be injurious, unmechanical and productive of permanent loss of function.

Orthopedic Operations for Intractable Cerebro-Spinal Cord Lesions, with Report of Two Cases.—HOMER GIRNEY (*Medical News*, vol. lxxx, No. 20).—The point emphasized by the author is to operate on these unyielding, stubborn and intractable deformities of cerebro-spinal origin, and having corrected or overcorrected them, to apply promptly a well-fitting, comfortable apparatus best suited to each individual case, thus facilitating locomotion and in a degree ameliorating the condition.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Diphtheria of the Conjunctiva Treated by Antitoxin.—HOLT (*Archives of Pediatrics*, May, 1902), reports a case of severe diphtheria of the conjunctiva in an infant of six months. The right eye was much swollen and reddened, and on everting the lid a patch of gray pseudo-membrane was seen covering about half the lid. There was marked conjunctivitis, and the cornea was slightly cloudy. No membrane in the throat or elsewhere; general symptoms those of moderate prostration. Temperature, 102°.

A fresh smear, and later a culture, showed presence of diphtheria bacilli. Two thousand four hundred units of antitoxin were administered, ice compresses applied, and a solution atropin dropped into the eye. In forty-eight hours temperature was normal. Improvement of eye was rapid, though the mem-

brane did not entirely disappear till the sixth day. On the tenth day the eye was entirely well.

The author points out that in pre-antitoxin days these cases usually went from bad to worse, ending in the destruction of the eye.

Action of Ozone in Whooping-Cough.—DELHERM (*Arch. de Med. des Enfants*, May, 1902) has treated twenty-eight cases of pertussis by inhalation of ozone. He describes the apparatus (a portable one) for the generation of ozone, and draws these conclusions:

1. Ozone is not a specific for whooping-cough, but it possesses very marked antispasmodic properties.
2. It has no effect in the catarrhal stage, and should be used only during the paroxysmal stage, three to four inhalations of ten minutes each being given in the twenty-four hours.
3. It rapidly diminishes the number of attacks.
4. It diminishes the congestive phenomena of whooping-cough.
5. Cases complicated with broncho-pneumonia did not have the number of their attacks lowered.
6. The paroxysmal period is often much shortened and the violence of the individual attacks much diminished.
7. Treatment should be continued a fortnight.
8. Given according to the method indicated; ozone is not at all toxic, and could even be given in combination with other remedies.

Treatment of Whooping-Cough by Compressed Air.—ROGAZ and DELMAS (*Arch. de Med. des Enf.*, May, 1902) report fifty cases of pertussis treated by this method. The precautions to observe are to have the pressure in the air chamber increased very gradually and decreased just as gradually. The extreme pressure (used only after several sittings) was one and two-thirds atmospheres. The time of the seances varies from one-half to one hour. The authors claim from the method of treatment that—

1. The attacks are modified in frequency, intensity and duration.
2. The total duration of the affection is much shortened.
3. The catarrhal bronchitis is much diminished.
4. The general condition improves decidedly under the treatment.
5. No accidents have ever attended the use of the treatment, and the dilatation of the right heart (so often found in severe pertussis) is no contraindication.
6. The treatment is applicable to children of all ages.

Buttermilk as Infant Food.—SALGE (*Jahrbuch fuer Kinderheilk.*, vol. 55, page 157, Feb. 1, 1902) reports the results obtained with buttermilk in the feeding of infants. One hundred and nineteen infants in Heubner's wards in the Charité Hospital in Berlin were put on this food.

Particular care was taken in the selection of the buttermilk, which, by repeated analysis, was shown to contain 2.5 per cent. of proteid, 0.5–1 per cent. fat, and 3–3.5 per cent. of sugar. The buttermilk was acid in reaction, and though not sterile was never used if it was more than twenty-four hours old.

15.0 wheat flour were mixed with a few spoonfuls of the buttermilk and 60.0 of sugar added. To this enough buttermilk was added to make one liter. The mixture was then slowly heated, taking about twenty minutes to bring it to the boiling point. It was then put into hot, sterile bottles which were sealed and placed in the ice chest to cool. Further sterilization was not necessary. Excellent results were obtained in the treatment of acute dyspepsia with this mixture. The children, varying in age from two weeks to three months, were given nothing but weak tea for one day, thereafter appropriate quantities of this mixture.

In several cases of severe enteritis this food also acted very well, the stools diminishing in number and improving in appearance, and the infants gaining steadily in weight. It was also found that the food was admirably adapted for cases of mixed feeding, various cereal foods being used in addition in certain cases.

In a few cases the observations were followed up with reference to the later development of rickets in infants fed on this mixture. No evidences of rickets were found in the cases examined.

The Feeding of Children During Their Second Year.—T. S. SOUTHWORTH (*Archives of Pediatrics*, May, 1902) in a very suggestive article emphasizes the fact that there is often great carelessness in the selection of a dietary during the second year. He insists that cow's milk should be the basis of a child's food at this time. Various articles may, however, be added with advantage.

Stale white bread, zwiebach, or simple crackers are usually relished and are allowable. Orange juice and prune juice are valuable to correct tendency to constipation. Thoroughly baked apple may be allowed.

Meat juice, except in children of nervous, rheumatic or gouty tendency may be used occasionally, though an excess must be avoided.

The various cereals, well cooked, should form a large part of the dietary, and the author sees no objection to a well-baked potato.

Soft boiled eggs are allowable at intervals.

Sweets should be absolutely avoided; so also tea, coffee, and beer (unfortunately the latter is given almost as a regular thing to children of the poorer classes).

Attention is also called to the fact that during the heated term, children should be put on light diet, and the point is made that undiluted milk is not necessarily light diet, so that dilution is necessary.

"Attention to this detail is perhaps the most important measure of prophylaxis in the whole realm of pediatrics."

Acute Intestinal Obstruction in Children.—WERTHEIMBER (*Jahrbuch f. Kinderheilk.*, vol. 55, p. 478, April, 1902).—In an article on this subject Wertheimber reports a case of obstruction in a girl of ten showing all the classical symptoms, which yielded, though not at once, to belladonna. This was given in the form of suppositories, each containing one-fourth grain of the extract, which were administered four hourly. In all, fourteen of these were given, amounting to one-thirtieth grain of atropin.

The exact nature of the obstruction could not be determined.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

A Case of Polyneuritis Following Malaria, with Autopsy.—LUZZATTO (*Berlin. Klin. Woch.*, April 28, 1902).—That polyneuritis can develop from a malaria is no longer a matter of question, as there are some forty cases already published. This is an account of a thirty-one-year-old laborer, who developed malaria a year or more before he became the subject of neuritic manifestations. These came on suddenly with pain and great muscular weakness. The muscles were flaccid and atrophied to a marked degree, especially on the extensor surfaces. No objective disturbances in sensation, but spontaneous pain, especially at night, was present. The reflexes were absent and the nerve roots were sensitive to pressure.

The man died of pneumonia. The autopsy showed marked evidence of malarial infection, though the plasmodia had not been demonstrated during life. The peripheral nerves were the seat of marked degenerative changes, especially in the axis cylinders and the myaline sheaths, which showed typical neuritic changes. Anterior horn cells, especially in the cervical region, were abnormal, according to the Nissl stain. These changes in the cord are probably secondary to the neuritic changes in the peripheral nerves. As no malaria plasmodia were found, it is probable that in this case the pathological appearances were not a result of a direct action of the malarial bodies, but probably an effect of the toxic action of the parasites.

A Case of Temperature Crisis in Tabes Dorsalis.—OPPLER (*Berlin. Klin. Wochenschr.*, No. 15, 1902).—Fever crises are sufficiently rare in tabes to be worthy of mention. Pel published a case in 1899, and he was not able to find, up to that time, a like case in the literature. The case is as follows: A man, forty-one years old, had very marked attacks of tabetic gastric crises, during which the prostration was very great. These attacks were repeated at intervals of six to eight weeks; at no time during them, or in the period between them, was there any rise of temperature. The usual tabetic symptoms became more pronounced, but the gastric crises changed in character. The prostration and weakness remained, but instead of the gastric symptoms there was a marked rise in temperature. The evening temperature was 40.4° C. in the axilla, and the morning temperature 39.2° C. Attacks took place at irregular intervals, while the gastric symptoms completely disappeared. It was found that phenacetin, in fifteen-grain doses, could control the fever if taken at the beginning of an attack. In all of these febrile crises careful examination of the spleen and other organs, for malaria, etc., was made, but always with a negative result. Whether they were caused by a central irritation of the fever center, or by the resorption of toxic materials caused by the suppression of the gastric crises is a question which further observation must determine.

A Contribution to the Question of Infantile Tabes.—IDELSOHN (*Deutsche Zeitsch. fuer Nervenheilk.*, vol. xxi, Nos. 3 and 4).—The mother of this child was treated for syphilis by the author, she having been infected by her husband shortly after her marriage. The first pregnancy ended in abortion. Four years after having been treated by inunctions, she gave birth to a child who is the subject of the above paper. The child is now six years old. The left pupil is much larger than the right and in neither is there any reaction to light; they both react to accommodation. Some diminution in the pain sensation in both legs. The patellar and Achilles tendon reflexes in both legs are absent. The peculiar combination of the luetic infection of the parents, the abortion of the mother, the death of a child in early years, point to a hereditary lues in this child, but there is wanting all objective evidence. It rather points to a localization of the syphilitic process in the central nervous system. There seems little doubt but that this is a good example of infantile tabes, of which numerous examples have of late been published. The difference between an adult and an infantile tabes seems to lie chiefly in the more benign character of the latter. In neither is there any pathological evidence of syphilis as such, nor does an anti-syphilitic treatment afford any improvement. This would seem to prove the metasyphilitic nature of tabes in children as well as in adults.

Laughing Attack (Lach-Schlag).—OPPENHEIM (*Monatschr. fuer Neurolog. und Psych.*, April, 1902).—This case seems to be unique, though now that Oppenheim has called attention to it other examples will no doubt be observed. The case is as follows: Eighteen-year-old girl, with no neuropathic history, shows this

startling condition when she is attacked with a hearty spell of laughter. The eyes become fixed, the face twisted, objects drop from her hand, and she falls to the ground; consciousness seems to be lost. Biting of the tongue and involuntary escape of urine were not observed. Such an attack happens only when the patient laughs violently, never at any other time. An attack cannot be brought about by sensory stimulation, such as tickling the feet. The condition has lasted for over a year. The objective examination was absolutely negative. In considering the nature of this case, the following were thought of: Epilepsy or hysteria, in which the laughing might be considered in the nature of an aura; organic brain disease, as for example a new growth in the territory of the medulla, which becoming swollen through hyperemia, presses upon the vasomotor center and causes the attack; multiple sclerosis, where the impulsive laughing commonly seen in that disease might be considered similar; the crises found in tabes, as ictus laryngis, etc. None of these seemed to offer any satisfactory explanation of the case, and further observation of similar cases is necessary before a conclusion is reached. No adequate name could be found by the author. The names Galossyncope, Galoplegie, Ictus ridentis, are less satisfactory than the merely descriptive term given by the author.

A Case of Primary Degeneration of the Pyramidal Tracts.—W. G. SPILLER (*Jour. of Nerv. and Ment. Dis.*, May, 1902).—Spastic spinal paralysis has no uniform pathological basis. A primary degeneration of the pyramidal tracts not resulting from a focal lesion is rare. Clinical summary: A woman, fifty years of age, developed suddenly weakness in her left upper limb, with loss of speech. The power of speech was regained after a day or two, but never again was quite normal. Two years after this attack she noticed that she was weak in her lower limbs and that the weakness gradually increased, so that walking became difficult. The reflexes in all extremities were exaggerated, and the Babinsky reflex was obtained. The gait was not decidedly spastic. No objective sensory disturbances were found and no pains were felt in the limbs. Muscular atrophy was not observed. Degeneration of the pyramidal tracts was found extending as high as the pons, but not above this. The degeneration was less intense in the anterior pyramid. The other tracts in the cord were normal; no meningitis; the cell bodies in the anterior horns of the cord were in part diseased.

The Muscular Factors Concerned in Ankle-Clonus.—S. WIER MITCHELL (*Jour. of Nerv. and Ment. Dis.*, May, 1902).—In a case of trauma of the spinal cord, the author observed that the remarkable ankle-clonus present was the work of the soleus muscle alone. The gastrocnemius was entirely passive. It has always been taken for granted that the whole group was concerned. Gowers believes that the gastrocnemius is the active agency in causing ankle-clonus. It was at first supposed that the case above was an exception, but on examining a number of cases of spastic conditions it was observed that in all of them the soleus alone was active in the clonus of the ankle. The proof is readily to be had in thin, spastic patients. To test the matter, let the patient be at rest, supine, with the leg fully flexed on the thigh; then grasping the belly of the relaxed gastrocnemius, with the other start the clonus. It will be observed, as the foot is flexed by the hand, the gastrocnemius is felt to become tense, but that as extension occurs no motion is felt in the belly of the muscle. The active agent in the series of extensions can only be the soleus.

A Case of Asthenic Bulbar Paralysis, with Autopsy.—LIEFMAN (*Deutsche Zeitschrift fuer Nervenheilkunde*, Bd. 21, March, 1902).—This disease has been of such great interest to neurologists of late than any new case, especially if pathological examination is included, is worthy of attention. Clinical resume: Nine-

teen-year-old girl, five years before the first appearance of the disease had an attack of diphtheria. In the course of two years she developed paralytic symptoms in all of the motor cranial nerves. The process began with a left-sided ptosis and facial paresis. After many remissions and exacerbations, a fully developed picture of facial diplegia, ophthalmoplegia externa duplex, with dysarthria and dysphagia developed. The muscular weakness was very marked. There was no typical myasthenic electrical reaction. Death took place with symptoms of dyspnea. The autopsy showed no changes that would adequately account for the serious clinical symptoms. There were no changes found in the muscles or in the nuclei of the cranial nerves. The only pathological alterations having any significance were a large number of homogeneous circumscribed foci, somewhat resembling casts in kidney specimens. These were found especially in the interstitial substance about the blood vessels and lymph spaces. These probably have no importance in regard to the pathogenesis of the disease. Infection, auto-intoxication, congenital weakness of the nervous system, have all been considered as possible etiological factors in the disease, especially the last one. Before an adequate explanation of this disease can be offered, two lines of inquiry must be followed, according to the author: experimental pathology and the chemistry of metabolism. The histology of the nerve cell will probably not throw much light on the subject.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. MCC. JOHNSON, M. D.

The Nature of Prostatic Hypertrophy.—GREENE and BROOKS (*J. Am. Med. Assn.*, April 26, 1902).—From the histologic study of fifty-eight hypertrophied prostates and the macular inspection of others, Greene and Brooks, after an elaborate exposition of their microscopic findings, conclude as follows:

1. Prostatic hypertrophy of the aged is the result of chronic prostatitis.
2. It most frequently arises from chronic posterior urethritis, of whatever cause.
3. True neoplasms of the prostate are rare and are not concerned in the production of prostatic hypertrophy.
4. Carcinoma is apt to occur in the hypertrophied prostate as a result of the chronic inflammatory process.

Suprapubic Cystoscopy.—KENNEDY (*Med. Rec.*, April 19, 1902).—In one case of prostatic retention the author made a suprapubic puncture for its relief, using a No. 21 Otis endoscope as a canula. The urine was drawn through this in stages by plugging and unplugging the instrument. Afterwards the lamp was attached to the endoscope and the bladder wall observed. The general condition of the bladder was plainly visible and the mouths of the ureters easily detected. It was impossible to learn as much of the size and contour of the prostatic lobes as desired, owing to the fact that with reflected light the distal end of the tube had to be almost in contact with the bladder wall in order to illuminate it, thus giving a very limited area under observation. Kennedy proposes that a better view could be obtained by using a short Valentine endoscope, with the light introduced through it and bent at an angle so as not to be in the line of vision.

Syphilis of the Bladder.—MARGOULIES (*Ann. des Mal. des Organ. Genito-Urin.*, April, 1902).—It is rather surprising that works upon syphilis are peculiarly

silent upon syphilis of the bladder. This is not so much because it does not occur as because it seems to escape recognition. After calling attention to a few evident cases in French, Russian, German and American literature, the author reports three cases of his own: one showing a tumor formation at the bas-fond, one an ulceration, and the third a hemorrhagic cystitis, all of which resisted other modes of treatment, but yielded steadily and rapidly to specific treatment.

While there are no particular specific symptoms by which syphilis of the bladder may be diagnosed, we must consider the possibility that the pains are of a syphilitic character, particularly if the history indicates that the patient has contracted syphilis, or if there are any manifestations from which we might suspicion it. More especially is it indicated if the local symptoms of the bladder are severe while the patient's general health remains good and the composition of the urine is but insignificantly modified. Finally, in doubtful cases, after a more or less prolonged treatment by other means without result, it is indispensable to essay the anti-syphilitic treatment, which, if it gives good results, confirms the diagnosis. By means of the endoscope we can watch not only the original lesion, but its retrogression, disappearance and whatever cicatrix it may leave.

New Method of Anchoring the Kidney.—DAVIS (*J. A. M. A.*, May 10, 1902).—The method consists in isolating a bundle of fibres of the quadratus lumborum muscle and surrounding these fibres with a flap of the proper capsule of the kidney. This flap is now stitched to a second flap of the *capsula propria*, so that the bundle of muscular fibres pass between the capsule and the kidney itself. This is but a preliminary report, and the one case operated upon is of too recent a date to predict the final results.

Pus Dilatation of One Member of a Double Ureter.—MUNRO (*Annals Surgery*, May, 1902).—In this case one member of a double ureter was distended with pus to the extent of nearly a pint. It communicated with the kidney above, but in the lower end there was a kink taking the shape of an omega, below this a probe could be passed freely into the bladder. The extra member was ligated above and below and excised. It was lined with mucous membrane.

It is of interest that in catheterizing the ureter from the bladder, the catheter drew urine free from pus, while around the catheter pus exuded freely. Evidently the catheter tapped the healthy ureter above its junction with the diseased member.

Contribution to the Pathological Anatomy of the Bladder.—HALLI and MOTZ (*Ann. des Mal. des Organ. Genito-Urin.*, January and February, 1902).—This is a most excellent and full study of the subject, and justice to the article cannot be done here.

Briefly the authors conclude in part as follows: In pure chronic cystitis the lesions are total, involving all the layers of the bladder wall from the mucous membrane to the external fibro-serous coat. The muscular hypertrophy intermixed with dense, thick, conjunctive tissue, involves the three muscular layers quite equally.

The chronic vesical lesions accompanying strictures differ but little from those of pure chronic cystitis. Here the thickness of the vesical wall reaches its maximum.

With prostatitis the lack of power of the vesical wall is largely due to the atrophy of the muscle fibres and their replacement by the large amount of connective tissue. The bladder of prostatitis differs from that of pure chronic cystitis especially in the unequal hypertrophy of the internal muscular layer allowing of the formation of trabeculae, and the atrophy of the external muscular

layer, allowing the herniæ of the mucous membrane, and thus the formation of sacculi.

In cachectic patients with neoplasms there is a simple atrophy of the muscular fasciculi accompanied by a superabundance of generalized, soft, fatty infiltration, a true fatty degeneration of the bladder walls.

Suppuration from Gonococci of a Wound for Radical Cure of Hernia in a Blennorrhagic.—GUELLOT (*Ann. des Mal. des Organ. Genito-Urin.*, April, 1902).—Patient was operated upon for right inguinal hernia. Next day acute gonorrhea developed in the patient. Four days later the temperature reached 38.2°, and upon opening up the hernia wound a mixture of blood and pus exuded containing staphylococci and gonococci. The patient was discharged seven weeks later, cured of his gonorrhea and with a good cicatrix of the wound.

The author thinks that the contamination took place by direct transportation at the time of the operation, and differs with Toussaint, who thinks that in the case he reported the dissection of the sac from the vas alighted an already gonorrheally inflamed deferens, thus producing a deferentitis and phlegmonous perideferentitis. The author believes that this, too, was a direct infection from the urethral discharge, but as the wound secretions were examined late, it was impossible to say whether the infection was primary or secondary.

In the light of these experiences it is well to examine the genital organs before doing an operation for hernia.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Statistics as to the Parasiticity of Alopecia Areata.—M. HALLOPEAU (*Annales de Dermatologie et de Syphilographie*, April, 1902).—M. Hallopeau, to elucidate this point, addressed the following questions to various confreres: 1. What proportions of cases per thousand have they observed alopecia areata in their private practice? 2. By what means have they been able to verify the contagiousness of this malady?

Sixty-one responses were received, and from these the following conclusions are drawn:

1. Alopecia areata frequently attacks subjects from direct or indirect contact.
2. Alopecia areata is a rare disease.
3. The transmission presupposes a parasite.
4. The difference in frequency of the disease in the various countries can only be explained by this interpretation.
5. The facts fail to show that direct and intimate contact is necessary for transmission.

The Currents of Emigration and the Expansion of Leprosy.—M. E. JEANSELME (*Gazette des Hôpitaux*, April 19, 1902).—From the study of the emigration of lepers in different parts of the world, the writer has formulated the following very important conclusions:

1. When leprosy is imported into a country of a white race and the civilization is European, it makes little progress.
2. All of the immigrants tainted of leprosy are not dangerous to the same degree for the white population, as a white leper is more apt to come into inti-

mate contact with the white population than one of another color, as was instanced by the immigration of Caucasians and Chinese into Queensland.

3. When white immigrants free from leprosy establish themselves in a leprosy country they rarely become infected with leprosy.

Some Remarks on Forms of Trade Dermatitis Occurring in the Silver and Electro-Plating Trades.—ARTHUR HALL, M. A., M. R. C. P. (*British Jour. of Dermatology*, April, 1902).—In the process of what is technically called "scratch-brushing," spoons, forks, etc., are cleaned by a revolving brush onto which sour beer, bought from breweries, drops from a trough above. This sour beer causes in the susceptible an eczema or dermatitis wherever it splashes, especially of the hands and forearms, as is proved by several cases cited by the author. In polishers and burnishers dermatitis, or eczema, is caused by the "rouge" which they use, the so-called "quick-rouge" being especially irritating; the mercury, which they all contain, is probably the poisonous principle.

In the treatment of these cases, where they do not have to dip their hands in liquid, a modification of Unna's zinc-gelatin is very efficacious, as it is also a protective. The formula is as follows:

R	Gelatin	16
	Calamine	12
	Glycerine	20
	Water	26
Mix *		

Clinical Diagnosis and Histology of Rodent Ulcer.—MM. DUBREILH and B. AUICHE (*Annales de Dermatologie et de Syphilographie*, April, 1902).—If one considers epitheliomas of the skin, especially those of the face, one is struck by their diversity, clinically as well as histologically. The frequency of the benignity of these epitheliomata is strikingly compared to those of the tongue, for instance; but this benignity is not always constant, for they often invade the ganglia and become general.

Epithelioma of the face may be divided into three principal clinical types:

1. Those of the lower lip (canceroid). They occur upon the vermilion border of the lip, often from a plaque of leucokerotosis, and are much more infectious and dangerous than any other form of epithelioma of the face, but less so than those of the tongue.

2. Epithelioma vulgaris, which may occur upon any part of the face, but especially about the middle of the zone extending from one to the other ear. These epithelioma are especially seen in countrymen and those exposed to wind and weather. They begin generally as a plaque of keratosis sinilis, as a thickening; become indurated and ulcerate, and when once they commence, their progress is exceedingly rapid; ganglion after ganglion is infected until the condition becomes visceral, cachexia and death supervenes. The progress of this form is far more rapid than the rodent ulcer, the infiltration of the underlying tissues more diffuse and profound, and the condition more inflammatory.

3. Rodent ulcer, which occurs most frequently in the upper part of the face, notably in the neighborhood of the inner angle of the eye. Sun and weather have no influence upon its development; it is preceded by a precancerous alteration of the skin as a firm, elevated nodule of pale or rose color. This nodule grows, ulcerates in the center and forms an ulcer with a flat bottom covered by little rose-red, firm granulations, which discharge a quantity of a light serum. The borders are sharply limited and hard, rose-red, yellow or pigmented, having the character of the nodule from which they sprang. The evolution is very slow, lasting five to twenty years; the lymphatic ganglion remain free.

*The manner of using this varnish or paste is given in all text-books upon dermatology under the head of zinc-gelatin.—(UNNA.)

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

The Ear Complications in a Severe Typhoid Epidemic.—SUCKSTORFF (*Zeitschrift fuer Ohrenheilkunde*, xvi. Band, Heft 1.)—In the fall of 1900 there was a severe typhoid epidemic in the city of Rostock, in which ear complications were frequent. Out of ninety cases, fifteen (or 13.4 per cent.) died. Eight of the cases (or 7.7 per cent.) had ear complications in spite of all precautions. In none of the cases was there any external ear trouble. In one the diagnosis was in doubt. The patient complained of deafness with ringing noises in the ear. There was some slight retraction of the drum. These symptoms disappeared. The patient had two relapses, but there was no return of the ear trouble. The others were outspoken cases of otitis media. The first symptoms appeared on the seventeenth, eighteenth, twenty-first, twenty-fourth, and twice on the twenty-fifth and twenty-eighth day of the disease. Two of the cases developed mastoiditis, one with an extradural abscess and destruction of the sigmoid sinus. The early and frequent involvement of the mastoid in otitis following typhoid is well known, hence this high percentage can be accounted for; but, on the other hand, both these patients were very somnolent, and all subjective symptoms were wanting. An early paracentesis might have obviated the mastoid complications. For the past year it has been the practice at the University Hospital at Rostock to examine the ears of all typhoid patients who become somnolent. The writer urges that this should be more generally followed.

On the Anesthesia of Mucous Membranes with a 25 Per Cent. Alcoholic Solution of Cocaine in Operations on the Nose, Pharynx and Larynx.—WROBLEWSKI (*Archiv fuer Laryngologie und Rhinologie*, Zwölftes Band, Heft 3).—The author greatly lauds the anesthetic action of the alcoholic solution of cocaine. With an experience of more than fifty cases in children as well as in adults, he has never seen any symptoms of cocaine intoxication. He believes that the alcohol acts as an antidote. The solution is best prepared by placing the cocaine and the alcohol in a test-tube and gently heating until the boiling point is reached. The cocaine quickly dissolves and the solution remains permanently clear. The first application of this solution causes considerable smarting, but may be obviated by first applying a weak watery solution of the same drug. It requires very little of the solution to produce complete anesthesia. The writer has employed this solution in the removal of adenoids and tonsils, as well as in various operations on the nose and larynx, with gratifying results.

On the Controlling of Hemorrhages After Tonsillotomy.—HEERMANN (*Archiv fuer Laryngologie und Rhinologie*, Zwölftes Band, Heft 3).—The writer reports a case of severe hemorrhage following the removal of a tonsil in a man aged forty-six. Failing to control the hemorrhage after resorting to various methods, such as compression, etc., he followed a method which has been used in such cases in the Burger spital of Cologne for the past twenty years, viz., the passing of silk ligatures through the anterior and posterior pharyngeal pillars and securely binding them together. The hemorrhage was immediately checked, and the ligatures caused the patient no inconvenience. With a properly constructed needle-holder the procedure is not a very difficult one, and the author believes it to be a precaution that should be more frequently employed, especially in cases which have reached a certain age when the tendency to hemorrhage is marked and medical aid is not at hand.

Indications for the Mastoid Operation.—HAMMOND (*American Medicine*, April 12, 1902) believes that mastoid abscesses invariably come from an infected middle ear. There are some subjects, particularly tubercular patients, who suffer but little actual discomfort during the progress of the disease, but ordinarily the pain is very severe. Tenderness on pressure over the mastoid is an important symptom when present. There is generally no swelling over the mastoid process until a later stage in the disease, and this is usually preceded by a swelling of the upper and posterior canal wall. This swelling may occlude the entire canal. Persistent tenderness of the mastoid with this swelling of the canal wall is always a signal to operate. The mere fact of absence of tenderness on pressure signifies nothing. This is especially true in chronic cases. The absence of heightened temperature does not indicate that the mastoid is free from inflammation, for cases are seen repeatedly with practically no fever, in which the mastoid is full of pus. The first thing to ascertain when examining a suspected case of mastoid trouble is as to the presence or absence of pus in the middle ear. A free incision should be made in the drum in all cases in which the drainage is insufficient, and in cases where there is any tenderness of the mastoid, cold applications may be made with advantage. The ear should be frequently cleansed, and the use of a hot douche every two hours will do this and will also aid in allaying the inflammation. If, in spite of all our efforts, the tenderness of the mastoid increases, or swelling of the canal wall appear, it is better to operate at once. If tenderness of the mastoid persists for a period longer than two weeks, with a continuous discharge from the middle ear, it is usually the safest plan to operate. As Dench has recently pointed out, the operation, when carried out by competent hands is never dangerous, while the disease frequently is:

The author summarizes as follows:

1. Mastoiditis is always subsequent to purulent inflammation of the middle ear.
2. Tenderness of the bone is an important symptom when present, but the mastoid may be full of pus with absolutely no tenderness.
3. Bulging of the canal wall is a most important symptom.
4. The absence of fever is no guide whatever.
5. Improvement in the hearing is usually indicative of subsiding inflammation in the middle ear.
6. The operation is safe; delay may be dangerous.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Rare Ocular Complications of Parotitis.—STREZEMINSKI (*Recueil d'ophthalm.*, February, 1902).—Abscess of the eyelid, which was observed by the writer during the period of incubation of mumps, is believed to be a unique complication of the general affection. In the absence of a history of trauma, etc., the ocular trouble may fairly be ascribed to a metastasis of the specific infecting agent.

Another case developed, in the third week of convalescence, a typical unilateral optic neuritis with total abolition of central vision. Perimetric examination revealed a large central scotoma with, however, the preservation of the normal peripheral field. Eventually the scotoma entirely disappeared.

Hyperemia of the disk and dilatation of the papillary vessels are relatively

frequent. Neuro-retinitis may occur from two to several weeks after the beginning of the attack. Occasionally atrophy ensues, and hence the prognosis should always be guarded.

A complicating dacryoadenitis is to be explained on the ground of the similarity of structure of the parotid and lachrymal glands. Paralysis of accommodation and of the recti interni have been noted.

Cases of Corneal Complications in Conjunctivitis Due to the Koch-Weeks Bacillus.—E. A. SHUMWAY (*Pa. Med. Journ.*, April 26, 1902).—Shumway has observed marginal corneal phlyctenulæ in a few cases of acute catarrhal conjunctivitis due to the Koch-Weeks bacillus. The observation conflicts with the experiences of others who regard the co-existence of acute conjunctivitis of specific origin and corneal complications as purely adventitious. In each of the three cases reported there was a definite history of contagion.

The Influence Immigration Has on the Spread and Increase of Trachoma in the United States.—A. E. DAVIS (*The Post-Graduate*, May, 1902).—Standish's paper on "Contagious Conjunctivitis" (1897), in which the author ascribed the continuance and spread of trachoma in the eastern cities of the United States to the constant influx of fresh cases from Europe and Asia was directly instrumental in bringing about the ruling of the Treasury Department that trachoma was a "dangerous contagious disease," thus requiring deportation of immigrants so afflicted. Davis has endeavored to determine: (a) To what extent the law of deportation has been enforced, and the number of immigrants deported under its operation. (b) The percentage of cases of trachoma in the clinics of the large eastern cities before and since trachoma was excluded as a dangerous and contagious disease.

(a) Prior to the promulgation of the order no definite knowledge obtains as to the frequency of trachoma in immigrants, inasmuch as the medical officers of the Marine Hospital Corps took cognizance of those cases only which were in the acute stage or whose sight was already seriously impaired. In 1899 the ratio of immigrants deported from New York on account of trachoma to the total immigration was as 1:800. In 1900 the ratio was 1:1300. In 1901, 1:1700. Statistics compiled from the records of other eastern ports exhibit very wide discrepancies and are probably unreliable. Nevertheless, a comparison of the total number of immigrants deported for trachoma with the total immigration at practically all the ports of entry of the United States gives, in the first year after the order went into effect, a ratio of 1:1000, in the second year 1:1500, in the third year 1:2100. Worthy of note is the "steady decrease in the number of cases of trachoma coming to this country since the law of exclusion was operative against them, a fact to be accounted for by the efficiency of inspection of immigrants here and abroad."

A certain number of trachomatous cases have been admitted under the ruling that a husband who has become a naturalized citizen may have his wife and minor children brought into this country although afflicted with a "dangerous contagious disease." Some cases, also, have entered through ports where inspection is less rigid than in New York. Immigrants known to be trachomatous are not infrequently booked to Canadian ports whence they easily make their way into the United States, their ocular trouble escaping undetected. Despite these antagonistic factors the law must be considered fairly effective, inasmuch as 900 cases of trachoma have been deported under its operation. The writer, while acknowledging the efficiency of the officers of the Marine Hospital, suggests that a six months' service in an ophthalmic clinic would better fit them for the detection of trachoma in all its manifold expressions.

(b) In 1891 statistics comprising more than 500,000 cases of eye disease collated from New York, Boston, Philadelphia and Chicago, gave for trachoma 4.25 per cent. In 1901, three years after the law of exclusion of trachoma went into operation, 90,000 cases in these cities (Chicago omitted) gave trachoma 2.71 per cent., showing a decrease of nearly one-half.

Polyarthrititis Gonorrhoeica Following Ophthalmia Neonatorum.—W. ALTLAND (*Klin. Monatsblat f. Augenheilk.*, April, 1902).—Comparatively few of the observations of associated polyarthrititis and blennorrhoea neonatorum have taken into account the postulates necessary to determine the precise etiologic connection, viz., the presence of the gonococcus in the conjunctival secretion and in the exudate from the joint. This is due in part to the rarity of the associated affection, in part to the difficulty of cultivating the organism. In a series of 660 cases of ophthalmia neonatorum occurring since 1876 in the ophthalmic service of the Allgemeine Krankenhaus at Hamburg-Eppendorf, this complication was observed but once. In the case reported both knee-joints became involved nine days after the beginning of the ocular trouble. The gonococcus was found in great abundance in the secretion from the conjunctiva. Several punctures of the knee-joints gave a thick, flocculent exudate containing numerous diplococci, reacting typically to stains. Cultures on human blood-serum glycerin-agar showed typical colonies. The patient made a complete recovery from the joint affection in three weeks.

The literature contains but sixteen cases of the combined affection, many of which were not submitted to bacteriological examination. The joints most frequently affected are the knee, wrist and ankle, the involvement occurring from five days to five weeks after the ocular infection. Moderate elevation of temperature is not infrequent. Immobilization of the affected joints by splints sufficed, in the writer's case, to effect a complete recovery. The outcome would in general seem to be excellent.

The course of the disease shows a striking similarity to the joint affections consecutive to specific urethritis.

BOOK REVIEWS.

A PRACTICAL MANUAL OF INSANITY. For the Student and General Practitioner.

By DANIEL R. BROWER, A. M., M. D., LL. D., Professor of Nervous and Mental Diseases in Rush Medical College, in Affiliation with the University of Chicago, and in the Post-Graduate Medical School, Chicago; and HENRY M. BANNISTER, A. M., M. D., formerly Senior Assistant Physician, Illinois Eastern Hospital for the Insane. Handsome octavo of 426 pages, with a large number of full-page inserts. Philadelphia and London: W. B. Saunders & Company. 1902. Cloth, \$3.00, net.

It is difficult to see just what purpose this text-book is supposed to fill. There are several which have been published in England, which are in every way superior to it, to say nothing of the American treatise by Berkley. It is questionable whether the mere multiplication of text-books on insanity is an advantage. A new text-book should have some definite aim, either presenting some new aspect of the subject, or some new and better arrangement of well-known data. Neither of these seem to be present in this volume. The classification suggested by the authors is based mainly upon that of Kraepelin and Agostini, but is inferior to both. It is puzzling to understand why melancholia, for example, should be considered as a subhead under acquired insanity, and mania under degenerative psychoses. The prevailing tendency at present is to consider these two as one symptom complex. A special division is given to moral insanity, a term which has scarcely a place in a clinical classification at the present time. One valuable feature of the book deserves to be mentioned, and that is, that various systems of classification are tabulated together so that it is possible to see them side by side. The illustrations are useless and crude, as they are not clear enough to tell the reader anything, nor are they selected carefully enough to present characteristic attitudes. The proof-reading is in parts careless and confusing. This book cannot be recommended because it adds nothing to the subject it treats of and does not state that which is already known in a form which renders it agreeable reading.

MORPHINISM AND NARCOMANIAS FROM OTHER DRUGS; THEIR ETIOLOGY, TREATMENT AND MEDICO-LEGAL RELATIONS. By T. D. CROTHERS, M. D. pp. 351. W. B. Saunders & Co., Philadelphia and London. 1902.

The special object of this work has been to group the general facts and outline some of the causes and symptoms common to most cases, and to suggest general methods of treatment and prevention. In this way the author tries to bring the subject out from its present empirical stage, and to encourage further and more exhaustive studies. Morphinism naturally occupies most of his attention, and of the 351 pages of the book, 270 (or over three-fourths) are devoted to this subject. Cocaine, chloral, chloroform, coffee, tea, tobacco and ether are each given a chapter, while arsenic, trional, antipyrin, ginger, cologne, gelsemium, sulphonal, paraldehyde, lavender and capsicum are discussed in less detail. The book is written in an easy, entertaining way, and many interesting and instructive cases are reported.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles, by Leading Members of the Medical Profession Throughout the World. Philadelphia: J. B. Lippincott & Co. 1902. pp. 306.

On the whole, this volume is distinctly superior to many of its predecessors, although, as was inevitable, the quality of the contributions is very uneven.

One of the best articles is by I. Boas, on Habitual Constipation. The etiology and the numerous varieties of constipation are well described, and therapeutic measures are discussed in satisfactory detail. Many of the dietary measures are described fully, and will be found very valuable. Horatio C. Wood, Jr., contributes a valuable article on Methods of Investigating the Action of Drugs; and Charles E. Simon an interesting paper on the Significance of the Basophilic Granules Found in the Red Blood Corpuscles in Chronic Lead Poisoning. Much of the material of the volume has, however, already appeared in previous publications. The Review of the Progress of Medicine During 1901, by E. W. Watson, is especially well written. One of the most attractive features of the volume is its illustrations, a beautiful photograph of Dr. S. Weir Mitchell in his clinic serving as frontispiece. The book will well repay perusal.

DISEASES OF WOMEN. A MANUAL OF GYNECOLOGY. By F. H. DAVENPORT, A. B., M. D., Assistant Professor in Gynecology, Harvard Medical School. Fourth edition, revised and enlarged, with 154 illustrations. Lea Brothers & Co. 1902. Cloth, \$1.75.

This well-known manual for the student and handy book of reference for the busy general practitioner has just appeared in its fourth edition, representing in its new form the latest advances. Clearly, but with considerable detail, the methods of gynecological examination, the simple form of treatment of the most common disorders of the pelvic organs, and the surgical features of gynecological diseases are given. The volume aims to be a practical one and therefore is principally devoted to diagnosis and treatment. Apparently minor points, ordinarily omitted from text-books, are described and explained by the author with remarkable care. Special reference may be made here to the elaborate manner in which the application of vaginal douches (p. 101), or the use of the pessary (p. 153), is dealt with. In a most satisfactory way the subject of menstruation and its disorders is treated in Chapter XIV. We cannot, however, refrain from offering some minor objections. While the writer on page 49 favors the introduction of the examining finger into the vagina under the sheet, he advises a visual inspection on page 60. We are of the impression that the exposure, necessary for inspection or proper introduction of the finger, will not shock the patient's modesty, if done with a certain delicacy. And for various reasons inspection should precede digital examination in every case. We do not agree with the author's view of the usefulness of the sharp curette in the treatment of puerperal septic metritis. Among the symptoms of uterine fibromyomas we miss the well-known alterations of the heart.

These trifling defects cannot detract, however, from the value of this excellent book, which we warmly recommend as a reliable guide for study and information in daily practice.

OPERATIONS. VADEMECUM FUER DEN PRACTISCHEN ARZT. Von PROF. DR. E. LESER, Professor an der Universitaet Halle A. S., Mitglied der kaiserlichen Leopoldino-Carolinischen deutschen Akademie der Naturforscher. Mit 84 zum Theil farbigen Abbildungen. Zweite vermehrte und verbesserte Auflage. Berlin, 1902. Verlag von S. Karger, Karlstrasse 15. Price, \$1.25. G. E. Stechert, New York, Agent.

This neat little volume of 186 pages must in every respect meet the wants of the country doctor who has no time to look up the technique of an operation in one of the larger works, even if he possess them. Leser's book does not embrace all that the specialist for surgery is supposed to need; this is intentionally the case, in order that more space may be afforded for the wants of him to whom the book is dedicated, the country doctor above mentioned.

Short chapters on asepis, antiseptics, wound treatment and local as well as general anesthesia, preface the chapters on the special operations. It is true they are not very exhaustive, but one is safe in assuming that the results in the country would be vastly improved if the doctors could only be induced to follow their precepts.

The illustrations are unfortunately not up to the standard set by the book in other particulars.

Since the first edition the author has improved the work by inviting the suggestions of doctors as to what more was needed by them; certainly an ingenious idea, and one which has been productive of good results. Especial praise may be accorded the plan of naming, before each operation, the instruments needed during what is to follow.

DER MUSKEL UND DAS GESETZ VON DER ERHALTUNG DER KRAFT. Nach einem popular-physiologischen Vortrag von DR. K. BUERKER, Privatdozent fuer Physiologie an der Universitaet Tuebingen. Tuebingen: Verlag von Franz Pietzcker. 1902. G. E. Stechert, New York, Agent.

This thirty-seven page pamphlet on the muscles and the conservation of strength concerns itself chiefly with four points, (1) muscle activity takes place only upon the destruction of a certain quantity of material of known quality; (2) a definite amount of work is performed; (3) that the muscle becomes warmer by this process; (4) the warmth plus the work equals the chemical potential energy used up.

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